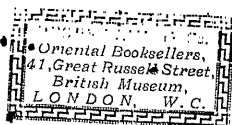


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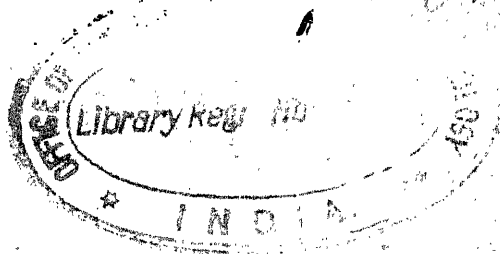
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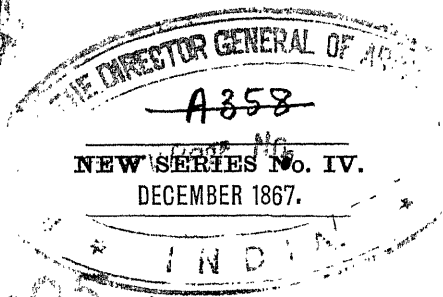
THE NORTH-CHINA BRANCH.

OF THE

ROYAL ASIATIC SOCIETY.



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JOURNAL
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ARTICLE I.

SKETCH OF A JOURNEY FROM CANTON TO HANKOW
THROUGH THE PROVINCES OF
KWANGTUNG, KWANGSI, AND HUNAN,
WITH GEOLOGICAL NOTES.

BY ALBERT S. BICKMORE, A.M.*

ON the 7th of August 1866, I left Canton in company with Mr. C. L. Weed, photographer at Hongkong, and Rev. Mr. Nevin of Canton, on a journey into the interior.

Our course, at first, was westward for about sixty miles through the great delta of the Sikiang, whose low, fertile fields spread out widely along the river banks and support a most dense population.

Along the borders of these low lands, rise serrated mountains—some peaks attaining an elevation of fifteen hundred to two thousand feet, their sharp ridges and projecting spurs, coming out in strong relief, on account of the scanty vegetation on their sides. To one who has been journeying in tropical lands, and especially among the dense forests of Sumatra, these mountains appear surprisingly bare; and only the more so, when he considers he is but on the verge of the temperate zone. This nakedness appears to be a universal characteristic of mountain scenery in China, but it is not the fault of the soil or the climate, for wherever the little pines are suffered to rise they show a vigorous growth. The cause of this universal deficiency in forests, seems to be the frequency of rebellions that have swept to and fro over the whole

*Read before the Society February 17th, 1867.

empire like a desolating scourge. In a few days, the Chinese can rebuild their low, mud houses, but nature requires years of continued peace to cover her mountains with forests, and rebellion has followed rebellion too quickly for her to accomplish the ever recurring task; and besides, the people do not care to labour much where there is a probability that outlaws will profit by their industry. Yet it is true they do raise some trees in a few places; but over the wide area that I have travelled not a tenth part of the soil is thus improved that might be, and then the trees are generally cut down before they attain any size; and this in districts whose population is numbered by the hundred thousand, and nearly all living in houses whose walls are of mud, and their rafters and floors the only wood they contain.

The old trees occasionally seen in groves around the Buddhist temples that only owe their preservation to the superstitions of the destroyers, show what splendid timber thousands of hill sides in China might yield.

But in regard to the low lands, it hardly seems possible that they could be made to produce more than is raised at present—two full crops being obtained nearly everywhere throughout the empire.

The continued fertility of these lands is due, no doubt, chiefly to two causes: first, the Chinese are careful to save everything that can possibly serve for manure, in some places even to the hair they shave from their heads; and secondly, these low lands are all, or very nearly all, subject to floods, at least once a year, and a deposit of fine mud is thus spread over them, just as in the valley of the Nile.

Following up the Sikiang through a deep pass in the first mountain range we came to the city of Shauking, where the Viceroy of Kwangtung and Kwangsi resided when the Portuguese first appeared off the Coast. At present it is mostly in ruins and its population probably does not exceed 20,000.

About two miles behind it rise the famous Marble Rocks or "Seven Stars," like dark, sharp needles out of the low green plain. Mr. Nevin and I measured them with an Aneroid barometer, and found them to range from one hundred to one hundred and fifty feet, above the plain, though they have been reported at nearly twice that height. The rock is a highly crystalline limestone, of a dark blue colour on the weathered surfaces, and of a rusty iron tinge where large fragments have been lately detached; the whole traversed in every direction with milk-white veins, and completely

fissured by joints and seams. They form as striking objects in the surrounding plain as the "Little Orphan" does in the waters of the Yangtse, and also like it, contain groups of little temples in the natural niches in their sides. Large temples are ranged at their feet, and one which we entered contained in the principal hall three images of bronze, six or seven feet high. In another room I noticed an idol with six arms. The whole building was going rapidly to decay, and it was only after much searching that we succeeded in finding two poor monks preparing a scanty meal in the refectory—the last place they were willing to desert in the whole temple.

Climbing up a steep, narrow stairway that rises diagonally across the face of the precipice, we reached a second temple, perched high in a little nook. Along a part of this stairway, a rude, heavy chain was fastened to the mountain side, that the timid and weary might help themselves onward to the temples above; and many must have been the pilgrims that ascended this difficult way, if we are to judge from the depth of the places their feet have worn in the solid rock.

The entrance to this temple was through a gateway or portal of loosened bricks, that leans over the precipice and threatens to fall with the first person who sets foot within it, and immolate him to its heathen God.

The priests informed us that this temple was built two centuries ago, when Shauking was a great and flourishing city; now, the monks can scarcely beg enough from their poor neighbours to satisfy their immediate necessities and their once splendid temples are rapidly becoming heaps of ruins. Here, as is frequently found in masses of limestone, several caves occur. We entered one of a bell shape. Its floor was mostly covered with water and a bridge led us to a platform at the farther end. As we were crossing this Stygian stream, we were saluted by a loud, fierce barking; but no other charm was necessary for us to safely pass the canine guardians than a show of our canes.

Many tablets have been cut in the rock and along a stairway that brought us to a picturesque temple, where the cave opens to the sky on the opposite side.

During the excursions in the vicinity of Shauking, both my companions became quite ill from the excessive heat, and at my urgent solicitation concluded to return and let me continue on alone.

In the second day from Shaiking I came to "Cock's Comb Rock," a huge wall or dyke of limestone, with a crest so jagged that the name the Chinese have given it, accurately describes it. Northeast from this in a small plain is a conical hill of the same rock, whose whole interior has been washed away, forming a much grander cave than the one previously visited in one of the "Seven Stars." All these rocks have the same characters and probably belong to the same geological period.

All the mountains in these regions are composed of fine, hard, silicious grits, which in some places are compact and flinty, i. e. quartz rock or quartzite, in others as soft as sandstone; and besides these, of slates that are interstratified with these grits, and in some places are soft clayslates, and in others as hard as shales. Half a mile below the little village of Kok-han on the left bank of the Sikiang, just before I reached the boundary of Kwangsi, I found these grits and slates *resting immediately upon granite in a nearly horizontal position*. The granite at this place was changed to gneiss to the depth of a few inches beneath these overlying sedimentary deposits.

Two miles below this village, rises "Ornamental Monumental Rock." It belongs to the lower part of this series of grits and shales, but is composed of a coarse conglomerate, and perhaps represents the conglomerates observed near granite in other parts of the empire.

Crossing the river at "Cock's Comb Rock" we came to a small village and anchored for the night astern a little gunboat. On consulting my map, I found, "*A favourite resort for robbers*" written round the next bend about half a mile up the stream; but I believed we must be safe with a gunboat so near, and taking care that my revolver was in prime order and that a heavy sword was within my grasp, I lay down determined to sleep, despite a continual din of tomtoms, and the most extravagant crying, and shrieking, and groaning of some women near by, who were lamenting the decease of a friend or relative. Late in the night, the watch on the gunboat began calling out loudly, then my boy and boatmen joined in, and though I could hear the noise of approaching oars, there was no reply.

The next instant the gunner on the gunboat fired his cannon, and at once the men in the strange boat all answered in the meekest and humblest manner. Our would-be robbers had that time mistaken their prey. This is but an illustration of the noises and alarms that occurred frequently, all the way to Hankow.

As we slowly ascended the river by poling, tracking and sailing, we stopped several times a day, that I might collect specimens of the rocks, and ascertain the dip and strike of the strata. In a week, we reached Wuchau, the last missionary station in this direction. Here I met Rev. Mr. Graves of Canton and induced him to accompany me up the Kweikiang or Cassia River as far as Kweilin, the capital of Kwangsi.

It is so dangerous ascending this river on account of robbers, that boats only leave Wuchau, when several are ready to go, and can keep together and afford each other mutual assistance in case of an attack. As an additional protection the mandarin offered to send along with us a gunboat, but only one policeman appeared and he carried no arms.

The boats used on this river are quite different from those seen at Canton. They have flat bottoms and curve up high at the bow and the stern, that the helmsman and a man on the highest part forward may see some distance ahead and avoid the rocks when they come down with the rapid current.

The principal article carried up the river is salt, and notwithstanding our boatmen all agreed not to bring a particle on board, they did buy a considerable quantity and tried to secrete most of it in one part of the boat. We very plainly informed them that if they left it there, it would go overboard. They finally—as nearly as I could ascertain—bought a permit for a part of it, and smuggled through the rest. This smuggling is so common, and so little regarded in the light of a crime, that I was repeatedly assured that the mandarin boats, which are carrying officials and therefore not liable to be searched, never go up or down any of these rivers, without improving every opportunity of evading the custom dues. Every day or two we came to a small house, with two large poles in front bearing large triangular flags, and there we were always obliged to stop and allow the boat to be searched by fierce looking fellows, each armed with a long stick pointed with iron.

Ascending this river is but little else than dragging a boat up one continued series of rapids, and though ours drew but five or six inches it sometimes seemed as if the boatmen would not be able to get her along any farther. This shows well the shallowness of the stream at this time of the year, and also the unfavourable fact that steamers can never be used on the river. The strength of the current is indicated by the fact that the

boatmen at Wuchau reckon fourteen days to reach Kweilin, and four days to return.

For the first hundred miles we passed only small, scattered villages, each having on the top of the highest hill near it a rude fort, where they keep their extra rice and clothing; for every village pillages on every other village, and on the boats that pass it, whenever they dare. These fortified hill-tops reminded us of the pictures of the middle ages drawn by historians, but these people observe even less law and order, than those of those early times. As an illustration of the perfect anarchy that obtains throughout the whole region, I may mention that on our third day from Wuchau we passed a mandarin boat that had been robbed of everything on her first night from Kweilin—the officials even not being able to escape these desperate thieves.

All along the river the mandarins were very kind to us, but kept asking how we could dare to come there, where only one foreigner had ever been before; and he, though he chanced to escape from the people of Kwangsi, was murdered when he got into Hunan. They referred to an eccentric genius who succeeded in reaching Hankow but was quite stripped of his clothing. His difficulties with the people were certainly one cause of their hostility to us.

Beyond the hien city of Chauping the country becomes somewhat more cultivated, yet it is very sparsely peopled and there is no need that a single man should leave China in order to find plenty of rich land to improve. The river here flows through deep passes, and we entered one called "Forest Pass," as the bright day was darkening into twilight. The rock was of hard, silicious grit, and quartzite and sharp peaks in the range rose up to a height of 1,600 or 1,700 feet. Like the famous Shaiking Pass, this is also a cleft in a mountain range; but while that is about six hundred yards wide, this is but from fifty to one hundred and fifty, and as we sailed along with such high overhanging precipices on either hand, the effect was far grander than anything I have elsewhere seen in China. As night overtook us while yet in the pass, we moved our boat to some huge rocks by the steep bank, and then climbed to the edge of a neighbouring ridge and waited to see the full moon, whose soft light was just then appearing in the eastern sky. And when her silver disk rose over the jagged edge of the highest peaks, and threw long, pointed shadows down the steep sides of the pass, we had before

as such a view as a lover of crayon sketches might well roam the whole world over to enjoy.

As we approached Pingloh, a high range of needle shaped peaks sketched across the river from east to west. They are composed of the same dark blue, highly crystalline limestone traversed with white veins, that had been previously noticed in the Seven Stars at Shaiking, and Cock's Comb Rock on the Sikiang. Here a pass gave a section showing this limestone apparently resting on the previously mentioned grits.

In the shady places were large quantities of a beautiful blue *Convolvulus* in full bloom, of the same species as specimens Mr. Graves had frequently found in the limestone caves near Shaiking.

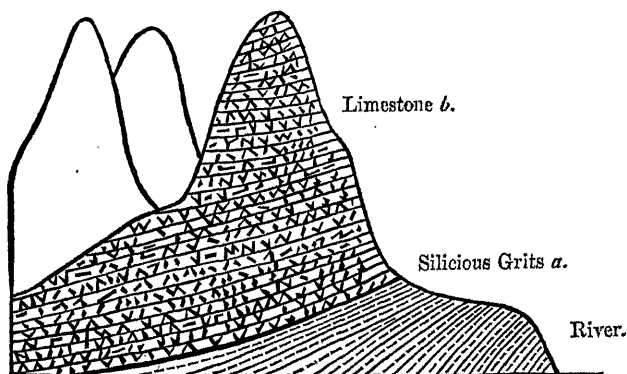
Our daily routine was to walk in the forenoon till the sun was high, and again in the afternoon till the boat had found a safe anchorage, Mr. Graves collecting plants and sketching a map of the river, and the writer collecting geological specimens, ascertaining the dip of the strata and the direction of the elevation—details too numerous to be given in full in this sketch.

On the evening after leaving Pingloh as we were following the river round a high bluff, we suddenly found ourselves on the edge of a valley ten or twelve miles broad and extending farther than we could see to the right and left. In every direction it was perfectly bristling with sharp peaks of limestone. The strata of this limestone were nearly horizontal, and once the whole valley was filled with this deposit, which in the course of ages has been worn into deep channels, that have kept widening until only sharp peaks are left of what was originally a broad continuous sheet of solid rock. From a single low position on the river bank I counted one hundred and ninety two separate peaks. The highest was, I judge, 1,200 feet above the plain, but even this probably does not represent the original depth of the formation.

On the low, level plain the people were cultivating rice, indigo, peanuts, sugar cane, millet and cotton; and the bright green colour of these crops contrasted sharply with the dark rocks rising abruptly up from the level lands; and made the whole view the most striking and picturesque seen on the journey.

A similar view is to be enjoyed among the contorted and fractured limestones, on the banks of the Tchussovaya, on the western flanks of the Ural; and it is probably to this same Devonian period, that these limestones and those previously

mentioned belong. On passing out of the limestone region the following section, No. 1, was obtained, a little above the market place, Hingping.



The limestone here rests *conformably*, as near as I could judge, on the grits that at Kokhan were found in turn resting on granite.

Nearer Kweilin the country becomes somewhat more level and better cultivated, and large water wheels twenty or thirty feet in diameter are common along the river banks where the rapids are strong enough to keep them moving. The water is raised by pieces of bamboo that are fastened to the rim at a slight angle and bring it up and pour it into a trough as they reach the highest point and begin to descend on the revolving wheel.

A small pagoda perched on a high rock and a hill through which there has been chiselled a huge hole, were pointed out by our boatmen as indications that we were approaching the capital of the province of Kwangsi.

Instead of being situated on the west side of a lake as represented on the best maps, it is on the west side of the Kweikiang, which here is only a small stream but may overflow its banks during the rainy season. The walls of the city are of blocks of limestone with a parapet of bricks.

We carefully closed our boat, and in the evening rowed up to the city. I at once, sent my boy to the Yamun to ask for chairs and policemen to protect us to the next city, as it was necessary to make a journey of fifty miles by land. All arrangements could not

be made till the next day; meantime, we were careful not to let any one see us, but in some way it oozed out we had come and early in the morning all the streets and boats near us were packed with people anxious to get a sight of the foreigners. At first we tried to escape them by moving rapidly from place to place, darting hither and thither like a bird trying to escape from a hawk; but we met a crowd every where, and concluded the better way was to go out on the front part of the boat and exhibit ourselves by turns to the curious public. When one throng had satiated their curiosity they generally left us, but they were immediately replaced by one still larger, until it seemed as if all the chinamen south of the Great Wall had come out to gaze at us. Meanwhile my boy arrived from the Yamun stating that all was ready, and the mandarin begged if I was going to Hankow I would proceed at once, for the whole city was so much excited on account of a proclamation that had been posted about, that he feared we might be attacked by so many he could not defend us.

Mr. Graves kindly translated the proclamation for me, as follows:

"It has already been determined by common consent, that if any one has anything to do with the IMPs or rents them a house or any other dwelling-place, his house and his family dwelling shall be immediately burnt to the ground, and his whole family, male and female, old and young, shall at once be put to death.

By Order of the Whole Provincial City."

Despite this formidable threat, I determined to continue to push on my way to Hankow. A great crowd gathered on the shore when I landed and the boys hooted and shouted, but I could not understand what they said and only hurried on my chair coolies through the suburbs, which were everywhere perfectly thronged. Two or three times I feared they would block up the street in front of me, and thus stop me altogether, but they seemed to have a suspicious respect for the barbarian and allowed me to pass.

When we came to the chief gate and were entering the city, some officials stopped my chair and drew me into their office from the press of the crowd, while they were instructing my coolies to go round the city and not through it. Here one of the coolies took this opportunity to run away, and it was a long time before another could be obtained, but I finally continued on between the city wall and the river, until we came to a great rock round

which we were ferried in a boat; and thus I was once more free from my persecutors. I also had the pleasure there of being able to walk myself; that I might hurry on my chair coolies at the top of their speed, and thus with all possible haste distance this city of Destruction.

Night however, overtook us when we were five miles away, and the two policemen guarding us, selected an inn in a little village, where we lodged for the night. After such a tumult it seemed so quiet and safe that I was tempted out into a neighbouring field, to note by the aid of an azimuth compass the direction of the valley we were to travel in on the morrow, and also the form of the mountains that bordered it. While I was absorbed in this view a man from the village passed by me and noticed the compass, so I shut it up and went back to rest, for fear he might think I was a geomancer.

Late in the evening the whole neighbourhood began to resound with a heavy beating of gongs and soon a large crowd, carrying torches, gathered in front of the inn and began shouting "KILL HIM! KILL HIM! KILL THE WHITE DEVIL!" I plainly saw they had come to rob me and kill me and feared the worst, but my policemen showed them my pass from their mandarin, and assured them that if they did me any harm the mandarin would behead them all and destroy the whole village. And after much spiteful discussion they offered to leave me on the condition that I should leave their village as soon as daylight appeared. The only crime alleged against me was that one of their number had seen me with a mysterious instrument observing the valleys and mountains, and they were all satisfied I had come to carry away the hidden treasures, which they were sure their land possessed.

Almost everywhere, when they saw me breaking the rocks, they at once concluded I was looking for gold, or silver, or precious stones. Another common belief is that a foreigner, who has blue eyes has the clairvoyant power of seeing straight through any quality of solid rock.

September 3rd.—At the earliest dawn, started up the valley to the north east, the general direction of the Kweikiang above Kweilin. The road or more properly path is only three or four feet wide and paved with blocks of limestone or cobble stone from the bed of the neighbouring river. Great numbers of coolies were passing to and fro, this being one of the four great high-

ways between the southern part of the empire and the valley of the Yangtse. The others are; that, from Kwantung over the "Meiling Pass" into the province of Kiangsi and down the Kan river to Poyang Lake; that from Lohchang over the "Lesser Meiling Pass" to Chinchau in Hunan; and one from Yunnan, the capital of the province of that name to Kweiyang, the capital of Kweichau, and thence down the Wu to the Yangtse.

At 10 A. M., the road came to a small tributary of the Kweikiang, coming in from the north west. On each side of this stream there had once been a large flight of marble steps nicely cut, and carefully laid, but now they are all falling apart and the whole work going to decay, the amount of traffic at present not being sufficient even to keep them in repair. On one bank was a small square pagoda-like tower, and near it two great iron pillars surmounted by a large ornamental cap. Around each pillar was an iron ring large enough for a sea junk. The people said they were to fasten robbers to—probably the Miautse, who live in the neighbouring mountains to the north and north west, and are said to come down frequently and plunder the smaller villages. Notwithstanding all such chains and iron pillars, these Miautse have maintained an uninterrupted independence, a proof of the continued weakness of the Chinese government in every dynasty.

At 2 P. M., stopped to lunch at an inn. The policemen insisted on my going into a small room and remaining there out of sight, till we were ready to start again, and after that, all the way to Hankow—a distance of eight hundred miles, I was so closely attended and so strictly guarded, that I found myself really a prisoner. I could make no detours to the right and left as I pleased, when we were passing objects of special interest. My compass I was obliged to carry under my vest, and only dared to take it out when we were away from any village and the road clear of coolies, but then my boy felt it his duty to remind me of the serious trouble it had just caused us; and besides whenever I looked at it often my policemen manifested a decided suspicion that I was a spy. Of course such restrictions narrowly limited my observations, yet I have no right to complain for all these measures were necessary for my safety. Through the province of Hunan I was constantly attended by one civil mandarin, one policeman, one military mandarin, and two or three soldiers.

2 P.M. came to Ling-sun, a hien city, 60 *li* from Kweilin. The Yamun was near the gate we entered, and the officials that quickly gathered round all seemed to be in good temper and regard me with pity rather than hate. I tried to give them some idea of my route by naming the chief places and marking out a rude map on the wall; but the policemen were afraid a mob might gather and took me to an inn where every room was full except one, and on one of the two beds in that, an old opium smoker lay stretched out, half stupefied with the drug.

It was properly more of a dungeon than a guest chamber. A single small piece of glass in the roof, which was little higher than our heads, admitted all the light we were allowed to enjoy, but my companion, at least, was blissfully indifferent to the inconveniences of our prison. Several small boys climbed up the partitions to steal a sight at their odd visitor, but I was becoming accustomed to such rudeness. Meantime numbers of the curious of both sexes, gathered in an outer room, and as a cloud of dust rose from the kang whenever I moved, it soon irritated my nostrils, and the whole party set up a loud laugh to think such a strange animal as a foreigner could *sneeze*.

After three hours, we continued on and passed out at the eastern gate. The whole city is a mere heap of ruins, and there are scarcely houses enough left, to line the single main street, so complete is the destruction made by the Taepings.

Surrounding the city is a small plain that appears very fertile and perfectly dotted with stacks of rice which the people are just now gathering.

A walk of thirty-five *li* brought us to Tai-ung-gong, a small village on the Kweikiang or Cassia river, for the water still flows towards Kweilin. Before we reached this place we crossed a small stream flowing into the Kweikiang from the north. In its bed I noticed pebbles of granite and porphyry, but all the rocks seen *in situ* were the common grits and quartzites. It contained many rafts of bamboos waiting to be floated down to Kweilin and Wuchau.

The valley here is nearly filled with small hills, but in this immediate vicinity only. Among them I gathered a beautiful blue bell, quite like that found on our own hill sides in New England. A kind of blackberry that grew in the old ruins by the roadside was ripening, and the opening of the asters also heralded the coming of autumn, as at home.

The next day we travelled fifty-five *li*, to the hien city Hingan.

The water here flows to the *north*, and the water shed is a few *li* to the south west of the city. It is not natural but artificial; what were originally only small streams have been enlarged and connected by canals, but it is only during the rainy season that they can be used, and then not for boats drawing more than two feet. The water is kept for a time in these canals by building dams across them wherever a rapid would occur, and allowing a stream to flow only through a gap in the dam deep enough for a single boat to pass over.

Hingan is in the same ruinous condition as Lingsun. It is one hundred and fifty *li* in a north-easterly direction from Kweilin. The river there was still so low that I was obliged to go seventeen *li* farther to the village of Tan-ka-tse, to take a boat for Sinchau, one hundred and forty *li* down the Siang. Along this route the water was so low that we were continually thumping, bumping, and grating over the rocks and coarse shingle, especially in the gaps in the dams.

These dams occurred every one or two *li*. They are made with a gap for boats to pass over by one bank, and by the other a sluice way, where as many as ten water wheels were sometimes seen one behind the other. It seemed as if there were more rapids in the fourteen leagues from Tan-ka-tse to Sinchau, than in the sixteen leagues from Kweilin to Wuchau on the other side of the water shed.

Sinchau is the chief city in all this region, and appeared nearly as large as Wuchau. It is not in Hunan but in the province of Kwangsi. There my boatmen bought some fossil Brachiopoda, which they all agreed in saying came from a waterfall ninety-three *li* distant among the hills.

Small boys gather them at the foot of the fall and bring them to the market to sell as curiosities. From the curved parts at the hinge, the Chinese call them "Hawks." A mandarin also gave me the same account of them. They probably come from the limestone already mentioned as resting on grits, see section No. 1.

The boundary between Kwangsi and Hunan is about one hundred *li* down the Siang from Sinchau. There, only low hills border the river, and the valley of the Siang really begins. All the way from Shauking near Canton to this point, the whole country is one mass of hills. Dark shales appear here, probably

14 SKETCH OF A JOURNEY FROM CANTON TO HANKOW, ETC.

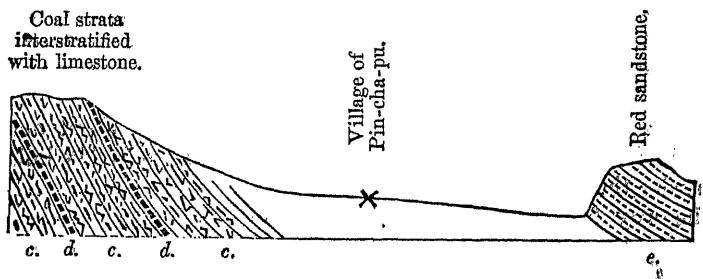
belonging to the coal rocks and apparently resting on the limestone over which we had been passing since leaving Hingan. In eight days from Sinchau, we reached Kiyang, which is situated on the left bank of the Siang, and not some distance back from it, as placed on the maps. Below this city, the country becomes thickly populated and well cultivated, and the temples which were all destroyed by the Taeping rebels appear everywhere newly built, contrasting in a marked degree with the dilapidated condition of the temples in every other part of the empire, and indicating the high prosperity of the people by whose contributions they are built. They are so numerous and form so conspicuous a part of every river scene along the Siang, that Hunan may properly be styled *the province of temples and the stronghold of Buddhism*.

Eight or ten *li* below Kiyang on the right bank, strata of limestone are seen resting on the ends of other limestone layers, as if the upper series belong to a wholly different formation—section thus:



The lower limestone has the jointed and fissured appearance of that represented by *b.* in section No. 1.

Eighty-four *li* below Kiyang, at the village of Pin-cha-pu, we passed a hill of limestone *interstratified* with coal. They were quarrying the limerock and using the coal obtained at the same time to burn it to lime. Dip of these strata 40° to the north, and a little further in that direction came red sandstone with a similar dip of 15° to 20° .—Section No. 3.



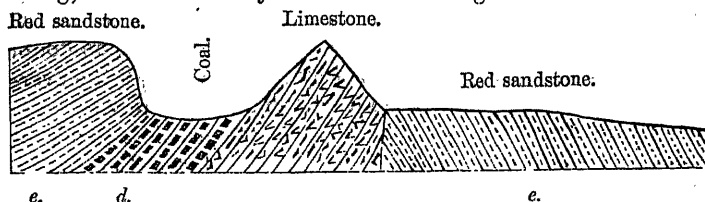
September 16th.—Stopped for the night at a little village one hundred and sixty-five *li* above Hangchau. As we arrived after dark no one saw me and I was left unmolested. All the evening there was even more loud talking and disputing, than I had been accustomed to hear, as if most of the villagers had been indulging freely in samshoo. Before we pushed off to anchor as usual in the stream, my boy asked the mandarin if he would like to take a walk along the front street, but he only shook his head in an ominous manner and replied "they are all ruffians, there." About ten o'clock very loud and excited talking began in a party on the bank near us, and soon one of them began screaming and groaning as if he had received his death blow.

Immediately his murderers brought him down the bank, put him in a small boat and paddled out close by us to the middle of the river, their victim all this time groaning more and more feebly and evidently dying. My boy said this man belonged to some other village and was carrying some money to Hangchau, and when the thieves had robbed him and he cried out for help, they wounded him and were then sinking him in the river.

By this time the officers at the Yamun commenced firing small cannon every ten or fifteen minutes, and kept it up regularly for some two hours.

I found we had thus unwittingly run directly into a nest of assassins, but I trusted no one had seen me, for that was the only way I could hope to escape alive. There was nothing for me to do, but keep as quiet as possible so as not to attract their attention, and leave the place at the earliest dawn. Determined when the event came to sell my life dearly, I threw open the lid of my revolver box and listened for many long, lonely hours, but finally fell asleep, and when I awoke again our boat was floating rapidly down the stream and this village of robbers was far out of sight behind us.

We soon passed the following section No. 4, and came to Li-chang, where some fifty boats were loading with coal.



This is the principal coal mine on the Siang. It is situated on the left bank, one hundred and forty-five *li* above Hangchau. As shown in the section, the coal beds rest on limestone, and this is also the case in Szechuen, in the coal regions near Peking, and probably in every part of the empire wherever both occur.

On the coal strata rests red sandstone, which originally covered all the coal deposits in this vicinity; the coal only appearing at the surface, where it has been thrust up through the overlying strata of sandstone, as seen in the section or when the sandstone has suffered very considerable denudation.

As we were but six miles from the village where the murder just described occurred, the mandarin sent to protect me, declared he would not allow me to land and travel through the mines; and I was therefore able to note only what could be seen from the river. All the "mines" that were thus observed, were merely deep pits in the sides of the hills, and consequently only "surface" coals are obtained. The engineers of steam boats on the Yangtse inform me, that the coal from this and the neighbouring mines has improved in quality considerably since the first was brought to market. It should be noted here, that the best coal usually occurs only below the water level, and the Chinese are obliged to stop when they come to that, for want of proper pumping apparatus.

The best coal in China therefore remains undisturbed, but there is much reason to doubt whether it will ever equal the best coals of England or America.

Hangchau is the great depot for coals in Hunan, and the military mandarin who accompanied me from that city to Changsha, the capital of the province, stated that, coal is mined at Kweiyang and Lichang (see Dr. William's map of China), and also at Sinlwa on the Tz'u-ling. It probably occurs therefore everywhere, beneath the red sandstone that covers the plains of Hunan, though it is mined only when it outcrops on the borders of these plains or when it has been brought to the surface by elevations that have taken place since the deposition of the red sandstone. When the present mines become exhausted, no doubt an immense supply may be obtained by boring through the overlying red sandstone—see left-hand part of section No. 4.

The wide extent of the coal beds in China promises much for the development of this land in the future. From Lichang to Moukden, north of the Gulf of Liautung, there is an almost

continued series of coal mines on the flanks of the elevations that border the Great Plain.

The most important place for trade in Hunan, is Siangtan, ninety $\frac{1}{2}$ south of Changsha. All the boats that come down the numerous branches of the Siang make this their point of rendezvous, and there is water enough for small steamers from Hankow, unless a bar occurs where this river empties into Tungting Lake. This place I crossed during the night and when there was a flood; besides, we did not follow the proper channel. When I reached this lake a heavy northerly wind had been blowing for six or seven days, and few or no boats had had crossed it during that time.

A southerly breeze then set in, and all the boats that had been harbouring in the many creeks and bays, came out on the lake; and at sunrise. I enjoyed a view only to be seen in this land that numbers its population by the hundred million. As far as the eye could see before us and behind us, and for several miles on either side, the whole surface of the water was perfectly feathered with white sails, some in sunshine, some in shadow, and others in the dim distance apparently gliding along on a thin film of air. Twice I counted nearly four hundred and forty in sight at one time, and with the aid of my field glass fully one hundred more could be distinguished, all leaning over before the same breeze and all bound in the same direction. Many were loaded with tea, many with coals, and many were just swimming along under huge deck loads of round timber.

This shows the amount of carrying trade between Siangtan with Changsha, and Yohchau and Hankow and other cities down the Yangtse. It also indicates that Siangtan is the most important place up the Yangtse, that is not yet open to foreign trade and suggests the question whether this city should not be added to the list of open ports, when the treaty is revised in 1868.

Near Yohchau silicious grits and quartzites again appear, where the elevation that forms the water shed between Hunan and Kiangsi crosses the Yangtse.

October 9th.—After sixty-three days of continued travelling, reached Hankow, the distance from Canton by the route chosen being about twelve hundred miles. This journey was undertaken expressly to ascertain the kinds of rocks in southern China and the order of their superposition. Full series of specimens were

collected at every interesting point and the preceeding sections and remarks show the succession of the rocks to be: *First*, and lowest, Granite, on which rests the *second* formation composed of Grits and Slates *a.*, in section No. 1.

These are covered *thirdly* by old Limestones *b.*, in section No. 2. On these rest *fourthly* another series of Limestone Strata *c.*, in section No. 2, and *c. c. c.* in section No. 3 of the same age as the Coal Beds *d. d.* section No. 3 and *d.* section No. 4. These Coal Beds are covered *fifthly* by Red Sandstone *e.*, in section No. 3 and *e. e.*, section No. 4.

The limestone in section No. 4 is probably that marked *c.*, in section No. 2, but may be that marked *b.* in section No. 2 and section No. 1.

Fossil Brachiopoda were obtained at Sinchau probably from the Limestone Strata marked *b.* sections No. 1 and 2, and appear to belong to the Devonian period, but all further discussion concerning them is deferred until they can be compared side by side, with full series from large collections in Europe and America.

A very rare and valuable collection of fossil plants was given me by M. l'Abbe David of Peking, from the coal rocks near that city. They probably belong to the same age as a series sent by Prof. Pumpelly to Dr. Newberry, and which that palæontologist considers as later than the Carboniferous, and probably Triassic.

Besides the above questions in geology, it was a matter of some interest in physical geography to learn whether there was a water communication between the river system of the Sikiang and that of the Yangtse. I ascertained that there was such a communication, as already noticed, in some seasons of the year, but the canals need much enlarging to be of any commercial value. This communication is artificial and has been made in the following manner. The east and west chain of mountains, in some places called the "Meiling range," and in others the "Nanling range" is here composed of separate ridges which instead of extending east and west run parallel with each other in a direction N. 60° E. and S. 60° W.

The Kweikiang takes its rise near the northern end of one valley, while the source of the Siang is at the southern end of the next valley, and for some distance these streams are nearly parallel to each other but flow in opposite directions. It was only necessary to make a canal between the two at right angles to their courses and the communication was complete.

This was done near the source of the Kweikiang where previously only a very slight elevation prevented the water at that place from flowing into the Siang.

If there were large reservoirs along this canal to receive the surplus water during the rainy months, and pour it out during the dry season, as there are along the higher parts of the Grand Canal, boats could pass to and from Kweilin and Sinchau throughout the year. But the chief difficulty is not here near the watershed, but in the many strong and dangerous rapids that occur all the way down the Cassia River from Kweilin to Wuchau on the one side, and from Hingan down the Siang to Yungchau on the other. To improve the navigation of these rivers to a satisfactory degree would, I believe, prove nearly as costly as building a railroad, without offering all the advantages of the latter for the development of the adjoining country.

Besides the water communication between the Sikiang and the Yangtse described above, it has been supposed another might be found by following up the Sikiang directly westward to Sz'ching, thence north westerly to Hingi and Nganngan in Kweichau, and thence northerly to some branch of the Wu River and so down to the Yangtse.

At first I proposed taking this route but decided on the one chosen on account of its being nearer the seaboard and therefore more immediately interesting. The topography of Hunan and the eastern part of Kwangsi being now sufficiently well known, it remains for the next traveller to take the second route through Kweichau and the central parts of Kwangsi and give definite information concerning the geography and geology of that part of the Empire. Such a journey will greatly increase our present knowledge of the wide ramifications of the rivers and canals in China—the completeness of her internal water communications being as much a wonder as the immense numbers of her population.

The route from Canton to Hankow, is the one proposed for a railroad between those cities, and I am able to state that there is no physical feature whatever that will render the work of any greater difficulty than in any hilly country. The great obstacle to carrying out such an undertaking will be the bitter hostility of the people to all foreigners, and their superstitious fear that any such work may affect the winds and rains, and deluge their crops with floods or parch them with heat. Again there seemed

to be but little produce transported either way between Kweilin and Sinchau.

From Sinchau and the other cities, Kiyang, Hangchow, &c., that we successively reached on our way down the Siang, many boats go laden to Siangtan and thence to Hankow, but they almost all return without any cargo. Along this part of the route there is a plentiful supply of coals at a very cheap rate, and wood enough for sleepers.

But I suggest that possibly a more desirable route might be: from Canton up the North River to Shauchau, and thence up a small stream in a northwesterly direction to Lohchang and over the Lesser Meiling Pass to Chinchau and down a branch of the Siang to Hangchau; provided this pass is not so high as to make deep cuttings or tunnelling necessary. All such difficulties would certainly be avoided by extending the line, as proposed, from Hangchau southerly to Kweilin, the capital of Kwangsi, and thence down the Kweikiang or Cassia River to Wuchau, but it is very mountainous between Kweilin and Wuchau and but comparatively little is transported either way.

The route over the Lesser Meiling Pass is the one by which the teas raised in the provinces of Hunan and Kweichau were transported to Canton when that city was the only open port; and when I was at Hangchau, the mandarins and boatmen all told me, that all their trade with the province of Kwangtung at present, was carried on by that route; and repeatedly they asked me why I did not come in this direct way, instead of selecting a route that had taken me twice as long. They also affirmed that there was no water communication between the source of the branch of the Siang near Chinchau and the source of the branch of the North River at Lohchang, on the south side of the water shed.



ARTICLE II.

TRANSLATION OF INSCRIPTION ON TABLET AT HANG
CHOW, RECORDING THE CHANGING THE T'IENT
CHU TANG (ROMAN CATHOLIC CHURCH)
INTO THE T'IENT HAO KUNG.

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H. B. M.'s Consular Service.

THE saints of old spoke of T'ien (Heaven) as being composed of the two principles, *Law*¹ and *Measure*; what they meant by *Law* was the motive influence by which out of chaos² were engendered the double state of existence (male and female), the harmonious action of the five elements (metal, wood, water, fire and earth) and the succession of the four seasons. What they meant by (Shu) *Measure* was the sun (day), moon (lunar month), signs of the zodiac (solar time) and evolutions of the heavenly bodies.

With regard to Ts'ang Ts'ang T'ien³ (dark blue heaven) that is only because of the deepness of the atmosphere, which being above the earth is included in the term T'ien (heaven, firmament).

When the I-ching speaks of the clouds moving, the rain pouring down and the universe in a state of transition, it simply denotes that the meritorious (beneficent) operations of heaven are all pervading. It does not state that ^{above 4}_{in} T'ien besides T'ien is a being who directs the movements of the clouds and rains. In fact the Shoo-ching says "T'ien sees because we the people see, T'ien hears because we the people hear." This means that ^{T'ien}_{heaven} neither sees nor hears, but that men derive their distinction between right and wrong, good and evil, from their own consciousness.⁵ It does not say in heaven there is a being with the organs of ears and eyes, and who busies himself with what he sees and hears.

Even those wild men of Chi tung⁶, Chow yen and Mung chwang, in their extraordinary and senseless ^{discourse}_{talk} never went so far as to say that Heaven had produced a being, who is able, dwelling in Heaven, to bind and to loose it; and from the centre of space's void to order heaven its place to recede to⁷, and without authority become the Lord of Heaven.

In the time of Wan li of the Ming dynasty a Portuguese Matteo Ricci came to China and invented the term T'ien chu⁸, Lord of Heaven; his doctrines gradually spread and were in the mouths of ignorant men and women. Those of his disciples who came to China undertook large building operations, dwelt in the various markets and spread all over the Empire. After the present dynasty had been established, the sacred ancestor, canonized under the name of the benevolent Emperor, (Kang hi) recognizing that these men were born beyond the long sea, and had come far for civilization, that, though their discourse was senseless, they were men of mind and intelligence, saw nothing to prevent their being taught reason; and allowed them to dwell in the capital (Peking), that by bathing in the fullness of the virtue of the sacred court they might, after a long time, change and attain knowledge, when they could return and teach their own countrymen the nature of Heaven and the bounties of earth. This was benevolence as profound as nature's height and depth! a beneficence which forgot nothing! Who would have thought that the habits of falsehood and obduracy were so deeply implanted (in them) that they could not be eradicated?

When the present Emperor (Yung chêng) came to the throne he was from the first aware of the wickedness of these men, and therefore, driving them south to Macao he did not permit them to reside in the interior of the country. He also ordered that the buildings they had erected as churches should be put to other uses. As these are too gorgeous, grand, superb and magnificent for people to dwell in with propriety, and as, if they are left empty, they will fall into ruin, the plan has been determined on of changing the church at Wu lin (Hang chow) into a temple to T'ien hao (Queen of Heaven). This plan will serve the double purpose of extirpating a religion of false gossip and obduracy, and of making an offering to a spirit who really has a beneficial influence over human destinies; and (there is the extra satisfaction of knowing) that this meritorious deed can be effected without trouble, and the action completed without expense.

The followers of Ricci have now been in China for two hundred years, during which time their evil courses have been numerous and long continued. As those who are affected by their doctrines are not able at once to appreciate the worthlessness of them, when they are duly appreciated they are regarded in the same light as the teachings of Buddhists and Taouists are at the present day. But (Christianity) has nothing in common with the doctrine of the holy sages with regard to the inculcation of virtue. Yet to manifest the greatness⁹ of the universe where everything exists, it (Christianity) is allowed to be preserved¹⁰ (in Macao) where it will not be spoken of.¹¹

These men (Roman Catholic Missionaries), who act criminally towards $\frac{\text{T'ien } 12}{\text{Heaven}}$ and corrupt men's minds and morals, not having as yet spread over the whole Empire, and I being well aware of their evil mindedness, I have, after mature deliberation, determined that unless I publish their wickedness I shall not be discouraging the disposition (that exists) to associate with them; and that unless I unveil their intentions I shall not be able to destroy their $\frac{\text{rashness}}{\text{arrogance}}$ in evil doing.

Their doctrine teaches that T'ien chu has attained the Lordship of and rules over all things—wind, rain, dew, thunder, the female and male principles, cold and heat. One cannot tell whether they mean to assert that before the existence of T'ien chu, there was no female or male principle, no cold, heat, wind, rain and dew; or whether there was then another Lord who ruled over them, and that T'ien chu succeeding him obtained his powers. This is the first error.

Again the converts have first to give up to be burned the tablets of their ancestors and parents, in order to manifest the sincerity of their conversion. Now as T'ien chu must either have been produced from nothing or have been born from ancestors and parents, even if T'ien chu were produced from $\frac{\text{space}}{\text{nothing}} \frac{\text{void}}{\text{void}}$ he has no right to force men to burn and destroy the source of the (family) spring and the root of the (ancestral) tree.

Again men in their veneration like to present an offering to Heaven, but, since heaven created man and the universe, it was he who created my parents and ancestors; then what pleasure can the burning (the memory of parents and ancestors) afford to

Heaven the creator of man and the universe. This is the second error.

Those who destroy the records of their parents and ancestors wish by so doing to demonstrate their reverence for T'ien chu. But I have heard that foreigners in their customs also have an Emperor and his Ministers. They have elder and younger brothers and friends, nor do they wipe out the memory of their generations;¹³ why do not they thoroughly annihilate these ties to do the will of T'ien chu and attain a still higher degree of merit? Why only cast off parents and ancestors like worn out shoes? This is the third error.

The foreigner's teach, that in science and art it is necessary to put forth one's utmost mental strength to acquire such a state of perfection that one may be satisfied to stand still; that the space of a man's life is not sufficient to enable him to complete half this labour, which he must hand over, in the stage to which he has advanced it, to his sons; and that these who receive the work in this incomplete condition must use their utmost endeavours to carry out the designs of their parents, which if still unperfected are handed over to the grandchildren to one or several generations, until at last posterity has perfected them. They then are in the condition to be humbly received. (They also teach) that those who have attained this degree of knowledge are the fit propagators of religion, and that the (Missionaries) who come to China are of this class.¹⁴ To this it may be objected that art and science are in no way connected with the daily moral exigencies of human beings, but on the contrary when carried to excess lead to monstrous arts and lewd craft, which are things not permitted by law. Again as these persons do not recognize their duties to their parents and ancestors, of course the parents and ancestors do not acknowledge their children. In fact they teach that the only motive that makes the parent acknowledge his offspring is the hope of perfecting monstrous arts and lewd craft, and the only tie the son acknowledges with his father is by his having bequeathed to him designs, the construction of which he has to complete. This is the fourth error.

Again they teach that having attained perfection a man should go forth to establish his religion; disseminate his doctrine, annihilating the memory of ancestors and parents for the benefit of men with whom he has nothing in common; and, neglecting his own kin, sacrifice the talent and labour of several centuries

in order to profit the requirements of other people. This is the fifth error.

From the above it is manifest that the (Christian religion) is one which tends to corrupt men's minds and morals, yet, were the evil confined to the converts, the crime (of the Missionaries) would be but small. But the truth is that the dangerous nature of their (secret) intentions is so great that it is unquestionable.¹⁵ Portugal (Europe) is several thousands of myriads of $\frac{1}{2}$ distant from China, a whole year does not suffice for the journey; then there are the dangers of the sea, the wind and the waves to be encountered, the separation from the (native) villages, (home), the leaving of wives and children and the fatigues of travel. If we judge from human nature we must come to the conclusion that all this is undertaken for the sake of profit.

The (foreigners) who bring their native products for the manufacture of implements cheat the Chinese out of incalculable sums of money; on the other hand one hears that those who enter the faith have money given them for so doing, but then the number (of converts to whom presents are to be given) is fixed, as is also the time (during which these presents are to be made). I do not think the foreigners are so stupid as to take an infinity of trouble and mental labour merely to get the wealth of the Chinese, in order that they may give it up for the benefit of the people in China. Some say that every year foreign¹⁶ vessels arrive fully laden with the silver of their country for the purpose of supporting persons to propagate their faith in China, and that this money is contributed by persons dwelling in those countries for the purpose of furthering the work, and not with the object of profit. These Missionaries not only teach the doctrine of T'ienth chu but also the art of making gold; thus their object is both to improve men's dispositions and to instruct those now ignorant of the means of attaining wealth. This only shews the dangerous tendency of their secret intentions.¹⁷

Some people say that the object is simply the desire of propagating their faith and attaining fame; and that in truth there have been men who have sacrificed their lives for philanthropical motives. In answer to this it may be said, you may perhaps find *one* who has so great a regard for fame, but it is incredible that the whole population of a nation should be so devoted to fame, that they should either give up their property and assist (in works of philanthropy), or come in crowds, like those

who reside in their churches, and be every where spread. That those desirous of fame should be so numerous is impossible. Alas in all probability they do this (the Missionary work) because they have some (sinister) object. One has only to regard their intrigues in Kao urh pa (perhaps Java) their tricks in the Philippines, and the unveiling of their cunning in Japan to be convinced, that in teaching their religion they do not confine themselves to propagating their faith, and that (they only use their religion, as they know) that among ignorant men and women are none whose emotions are not stirred by the idea of (future) misery and happiness.

At present in Japan at the straits where the port is situated they have made a copper image of T'ien chu, and those who go to that country without trampling on the image of T'ien chu are deemed guilty of unpardonable crime. If then T'ien chu receives such an insult and degradation as being trampled on, at the hands of a petty foreign state, and has no means of (avenging it); it is evident that it is because he has no power over human happiness and misery.¹⁸

Even if one discusses the implements which they (are said to have) brought to perfection, the Hsien chi¹⁹ and Yü hêng (Revolving spheres and Jade tube); these existed in the time of the Tang²⁰ and Yew dynasties. As for their Sundial and Compass, Duke Chow²¹ had them in his time: with regard to the self striking clocks and water time-piece, they already existed in the time of the Han dynasty: and as to their astute contrivances for startling people such as the wooden ox and automaton horse, why Chu ko²² Marquis of Wu in the time of the five dynasties had them made by spirit workmanship. The tradition of them has been handed down to the present times.

As the Missionaries teaching is untrue; as their instruments have been invented by Chinese; and as their science cannot affect the ^(future ?) the happiness or misery of mankind, I cannot make out how it is that any one has been duped by their discourse.

The sacred ancestor, canonized under the name of the benevolent Emperor, bestowed two hundred Taels of silver on the foreigners resident at Hang chow. Now this was only an acknowledgement of the fact that they had come from a distance, and a mark of compassion. But these people went and set up a temple in the north east corner of the Provincial city, and put up

a tablet on which were the words "Built by Imperial Order." To justify them in doing this they ought to have received an Imperial Edict specially commanding the building; all that they did receive was a gratuity of money, and they then falsely arrogated the reputation of the exertion having been made by Imperial Order. Now there are numerous officers, both in the capital and the provinces, who have received gratuities of public money; these men can (if they like) put up a board on which is written "bestowed residence," but the fabrication of the jade decree²³ is a crime of the greatest enormity, a crime with which other crimes are not to be compared.

Let us do away with $\frac{\text{that which}}{\text{those who}}$ spread these disorderly and (the Church which) unenlightened ideas, and present a temple to a being who has a beneficial influence over humanity. Let the fabricated reputation of the church having been built by Imperial Order be destroyed, and let the building be presented to One, who though she appears by right in the (sacred) records has not as yet a temple devoted to her.




The name, surname and generation of the spirit T'ien hao are written in the books, and though implicit belief cannot be placed in these, yet there are traditions which have been handed down by various Emperors of our dynasties; and even foreign nations have shewn their respect for her by the frequency of their offerings and by the numbers that have attended festivals in her honour. Owing to her protection fishers and traders have travelled over the ocean billows and stormy surf with a fixed day for going and returning, as safely as if they were navigating the rivers creeks and bays. And the spirit of T'ien hao has watched over them. Yea her spirit all pervading has been a beneficial influence working vastly for humanity.

Then let us do away with false doctrine and $\frac{\text{show our gratitude}}{\text{reward merit}}$ by re-establishing the memory of virtue. Let us change the abode (of the Christian religion) into a temple. Let us destroy their execrable idols and images in order to make proper ones, that hereafter the eyes of the Hang chow people may no longer see the abode of T'ien chu and that their ears may no longer hear the name of T'ien chu. Then the abominable acts which the Missionaries have practised for 200 years will no longer give them a field for intrigue. Heretical doctrine and corrupt speaking will then in course of time be done away with—and there will be the great and lasting result—preservation of morals.

Given this——day 9th moon of the 8th year of Yung cheng, (Oct. 1730) 47th year of Cycle, by Li wei (Titular) Guardian to the heir apparent, (Titular) Chief Secretary of State for the War Office, Assistant Inspector General of the Censorate, Viceroy of the Che kiang Provinces, Commander of the Forces, and Provincial Chancellor of the Exchequer, Governor General and Salt Commissioner, (Titular) Head of the police for the seven *foo* and five *chow* in Kiang nan, viz., Chiang ning foo, Soo chow foo, Sung chiang foo, Chang chow foo, Chên chiang foo, Huei an foo and Yang chow foo—Chang chow, Hai chow, Pi chow, T'ung chow and Chu chow, Six times honourably mentioned, Once recorded for promotion, and Once for distinguished military services retained in office though in mourning.²⁴

Observations.

1. Another common definition of 理 li law is 天理通和 T'ien li t'ung ho, Universal Harmony is heaven's law.

2. Tai chi 太極 generally translated Final cause is represented by the
 1st stage 2nd stage
 following symbols   Chaos is 混元 Hun yuan and is represented by the following symbol  It is on account of the symbols that I have translated Tai chi by the "motive influence from which out of Chaos" as it is the curved line in the first figure which represents the Tai chi. In the second figure the light part represents heaven or the Yang (male) principle and the dark part earth or the Yin (female principle.)

3. 蒼蒼天 Ts'ang Ts'ang T'ien is a very common Chinese oath; the 天 I had always imagined to be an ellipsis for T'ien yè 天爺, when the meaning of the oath would be, Oh Lord of the deep blue heaven or firmament. It would not have suited the purpose for which this tablet was erected to give this rendering, as here the personality of T'ien is denied, hence the rather awkward explanation in the context.

4. Here a character is broken off the tablet. I do not know whether it was 下 hea below 上 shang above or 裡 li inside.

5. This is somewhat what Confucius says. I quote from memory. "Let the man who will be perfect attentively consider the causes and the effects of every action, let him do this with an earnest diligence to a hair breath, forgetting and leaving out nothing; then after a long time shall he have attained knowledge and be a fit ruler of hundreds." This and the context would seem to denote that the Chinese had an idea of the utility theory in ethics, or stated syllogistically,

Experience shews what is harmful and what is useful.

What is harmful is bad.

What is useful is good.

Experience then is the text of what is good and evil and forms the standard thereof.

Experience is gained from one's own consciousness.

Therefore the standard of good and evil comes (from within) from ones own consciousness, and not from the commands of a Deity which is without.

6. Of the wild men of Chi tung the San kwo chi says, 齊東絕倒之語 偏足煽惑愚人如蒼天已死黃天當立是己 The delusive doctrines of Chi tung were sufficient to lead astray and excite foolish men, such as "the azure heaven is dead and the Yellow heaven is already established."

7. Can this be an allusion to the passage in the psalms?

8. Before ever Matteo Ricci ever came to China existed the term Shang ti 上帝 Upper ruler, which is the term adopted by the Protestant Missionaries for God. Except that Shang ti has a body. I should imagine that the term would express to the mind of the Chinese much the same idea as the early Christian idea of God. The early Christians believed in the personal existence of the nether deities, whom they considered dæmons; and the Chinese in the same manner believe in the existence of a being who is the Christian's God, but object to the precedence given him over their own Gods, and the assumption of the title T'ien chu Lord of Heaven.

9. The greatness of the universe here used much as an Arab says, *allah akbar*, God is Great. That so extraordinary a thing should be.

10. 存 Tsun. Christianity is not to be exterminated in spite of its faults; in order to vindicate the greatness and variety of the universe it is to be as the Kwai's monstrosities—to exist but not be spoken of, so it is to exist at Macao instead of being altogether expelled the Empire.

11. 不論 Pu lun. There were four things which Confucius never spoke of 怪力亂神 Monstrosities, Physical force, Horrible crimes, and Deities.

12. Act criminally to (Heaven) T'ien by setting up as a rival the Lord of Heaven.

13. Alludes, I presume, to the monks calling each other brethren.

14. It would seem that the writer of the tablet confounded the religious with the scientific teaching, and thought that the latter was part of the Christian Faith.

15. The secondary importance given to Parents in the scriptures in such sentences as he that "Loveth his father or mother more than me is not "worthy of me," and "A man shall forsake his father and mother and "cleave to his wife" must seem very immoral to the Chinese who make filial piety the keystone of all goodness.

16. 紅毛 Lit. Red haired, a common word for foreign.

17. On the principle I suppose of *omne ignotum pro horribili* the tablet never states what the secret intentions of the Missionaries are.

18. This last argument is this "Dont serve the Christian God as he cannot do anything for you," and reminds one of how much the principle of not serving God for nothing is implanted in half civilized minds, and of the rather naive address of Licinius to his soldiers when he was going in to battle with Constantine.

19. 琉璃 The Hsien chi I have seen, it is a great number of hollow spheres which revolve one within another in every direction, on the same

principle that school room globes revolve; on the outside Globe of the Hsien chi were depicted various constellations, some of which were recognizable, on the inside globes were represented rivers, seas and mountains.

玉衡 Yǔ hêng, I do not know what the Yǔ hêng is.

20. 唐 Tang 虞 Yew better known as 堯 Yao and 舜 Shun. Emperors who are highly praised by the Chinese classics. They are said to have been the fourth and fifth rulers after the commencement of the world.

21. Duke Chow a minister in the Chow dynasty who invented the Abacus.

22. Chu ko. Liang called K'ung ming lived in the time of the three Kingdoms he was the Tutor of LIU PEI.

23. Jade decree, no one but the Emperor is allowed to use a jade seal.

24. A mandarin is required to retire from office, for the space of three years, after the death of a parent.



天主堂改為天后宮碑記

古昔聖人之言天者理與數二者而已大極生兩儀五氣順布四時行焉此言理也日月星辰經度次舍此言數也至于蒼蒼者則積氣爲之地之上即天一言盡之矣易曰雲行雨施品物流形言天之功用如此其盛非謂天之復有施行此雲雨者書曰天視自我民視天聽自我民聽言天無視聽就羣黎百姓而寄此善惡是非之理非謂天之上真有具耳目之質而司此視聽者雖齊東之野人鄒衍蒙莊之性誕不經亦未有指天所生之人以爲能踞乎天之上捺之縱之于清虛廣漠之中使天亦退處于無權而爲之主者自明季萬曆年間大西洋利瑪竇入中國造爲天主之名而其教遂蔓延於愚夫愚婦之口其徒之入中國者遂大興土木營建居室于通都大國之中我朝定鼎以來

聖祖仁皇帝念其人生長海外遠來就化雖爲說不經然皆具心思知識未必不可教道居之京師使沐浴

聖朝德化之盛久而幡然改悟歸以教其國中之人咸知天經地義之正此乾坤履載之

深恩不遺一物之義也豈知荒誕狂悖之見固結而不可解我

皇上御極之初洞燭其奸黷其人皆歸南澳不得盤居內地而直省之所爲天主堂者將以次而改矣顧其制皆崇隆巍煥非編戶之所可居空之又日就傾圯去荒誕狂悖之教而移以奉有功德于蒼生之明神不勞力而功成不煩費而事集此余今日改武林天主堂爲天后宮之舉也雖然自利瑪竇之入中國迄今幾二百年浸淫沉溺其教者未必一旦有豁然之悟即悟矣視如今日二氏之說雖無當于聖賢道德之旨不妨存而不論以見天地之大無所不有此其得罪于天而爲害於人心風俗者卒未大白于天下也余既深知而熟悉焉不申其罪無以服附和之心不誅其心無以破奸詭之胆教稱天主是風雨露雷陰陽寒暑彼皆得而主持之也不知未有天主之前將竟無有陰陽寒暑風雨露雷乎抑別有主持之者俟天主出而授之柄乎此其謬一也入其教者必先將本人祖宗父母神牌送與燬棄以示歸教之誠不知天主生于空桑乎抑亦由祖宗父母而生也彼縱生于空桑亦不得率天下之人而盡棄其水源木本之誼況人之所以敬天奉天者以天實能生人生物耳今以生我之父母祖宗而棄絕之不知尙何取于生人生物之天而敬之奉之此其謬二也棄絕父母祖宗者欲專其敬于天主也然聞西洋之俗亦有君臣有兄弟朋友且生生而不絕則何不盡舉而廢之而所以事天主者尤專且篤而獨父母祖宗棄若敝屣此其謬三也西洋之教一技一能務窮思力索精其藝而後止設所得止及于半而年不我與則舉而授之其子其子即就所受之半而接續以繼其思猶有未達則復舉其所得而授諸其孫或一傳或三四傳其藝始精則羣然推而奉之以爲此可以行教之人矣今之入中國者悉此類也夫一技一能原無當于生人日用之重至于奇技淫巧尤爲王法之所不容今既不知有祖宗父母則爲其祖宗父母者當亦不復以子孫視之獨至奇技淫巧之事父忽念其爲子而不啻箕裘之授子忽念其爲父而不啻堂構之承此其謬四也藝既精矣遂可出而設教行道矣夫既祖宗父母之盡棄其他漠不相識之人復何關痛癢而必窮數世之精力以利他人之用此其謬五也然此雖足爲人心風俗之害弊止及于惑其教之人其罪猶小至其居心之險則尤有大不可問者西洋去中國數千萬里而遙非經歲不得達又有大海風濤之險去故鄉離妻子跋涉而來以人情論必有所利而爲之攜帶土物造作器用誑中國之金錢誠不可數計然吾聞入其教者必有所資給人有定數歲有定額勞心焦思取中國之財仍給之中國地方之人圖利者恐不若是之拙也或云每年紅毛船到必廣載其國中之銀錢以濟此在中國行教之人或又云彼來中國者皆善黃白之術以彼國之金而用之中國且以此數人之行教而國中居守之人肯傾其費以佐之用所圖者非利也彼既以天主之教教人而復借黃白之術以收拾人心則以幻術愚人以貨財結人共所設心殆有在矣或又爲之說曰彼其志欲行教耳好名之人能讓千乘之國何難去故鄉離妻子蹈不測之大海以博後世之名夫好名之人誠有捨其身以殉人者然一人好名何爲而國中之人亦皆好名而傾費以佐之也且絡繹而來其居天主堂者所在而有是何好名者之多也嗚呼此蓋非無所爲而爲之者一見其技于噶爾巴矣再見其技于呂宋矣又幾肆其技于日本矣爲行教計耶抑不止爲行教計耶愚夫愚婦未有不以禍福動其心者今日本于海口收港登陸之處鑄銅爲天主跪像抵其國者不蹈天主像則罪至不赦既爲天主之主而受海外一小國如此蹂躪毀蔑卒亦無可如何其不能禍福人明矣所精者儀器璫璣玉衡見之唐虞矣所重者日表指南車周公曾爲之矣所奇者自鳴鐘銅壺滴漏漢時蚤有矣所駭人者機巧木牛流馬諸葛武侯行之鬼工之奇五代時有之至今猶有傳流之者其說不經其所製造亦中國之所素有其爲術又不能禍福人吾不知何爲而人之惑其說也西洋人之居武林者

聖祖仁皇帝曾有白金二百兩之賜此不過念其遠來而撫恤之彼遂建堂於省城之東北隅顏其額曰勅建夫曰勅建必奉特旨建造而後可今以曾受賜金遂冒竊勅建之名內外臣工受

國家白金之賜者多矣以之築室遂可稱爲賜第乎干國憲而冒王章至矣蓋矣他復何可勝道耶誣罔不經者宜去則有功德于人者宜祠也冒竊勅建之名者宜毀則列在祀典向無專建之廟宇者宜增也

天后之神姓氏顛末見之于書者雖亦未可盡信然我朝

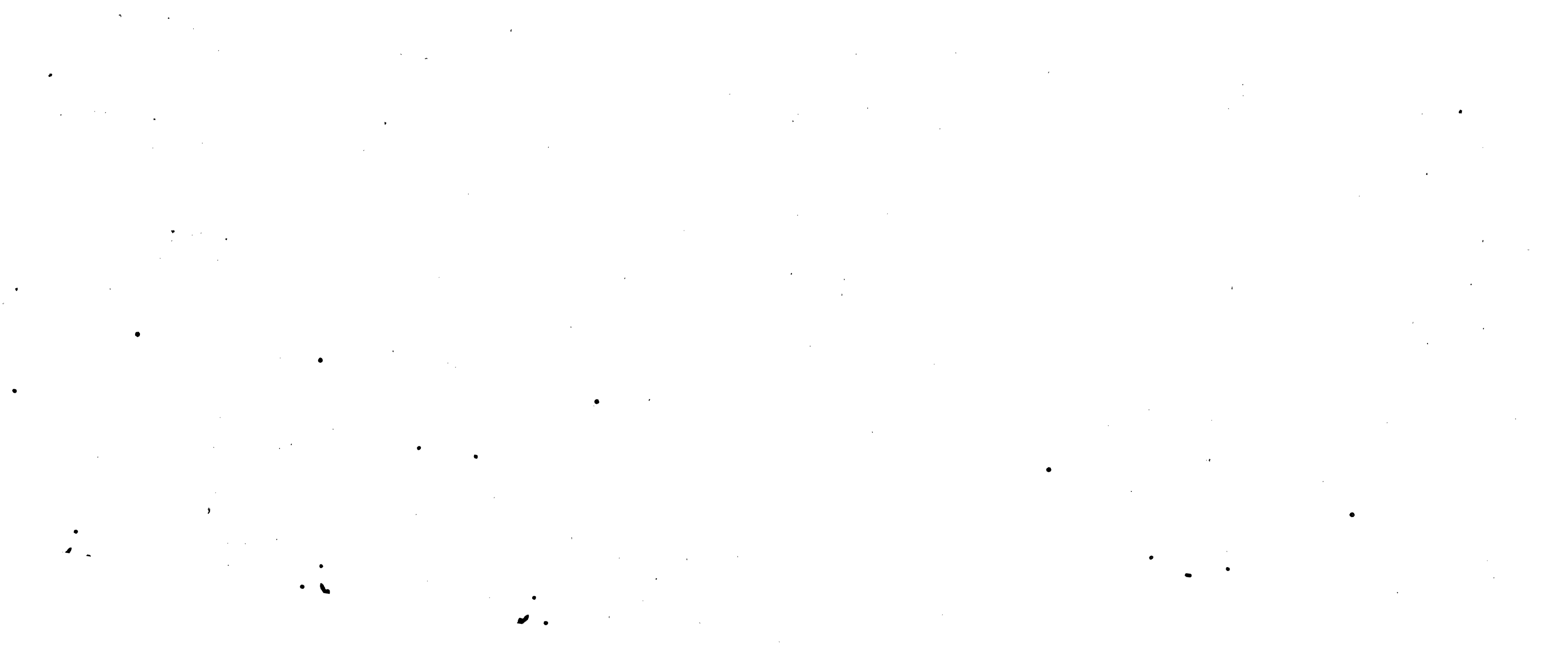
歷聖相傳海外諸國獻琛受朔者重譯而至魚鹹商賈出入驚濤駭浪之中計日而去尅期而還如行江河港又之間而

天后之神實司其任神之靈應呼吸可通德功之及民何其盛哉荒誕不經者去而崇德報功之典興毀其居室之違制者改爲廟貌徹其像塑之詭秘者設以莊嚴夫而後武林之人目不見天主之居耳不聞天主之名二百年來深

沉詭秘之術將無所施其技異端邪說久且漸熄其有關於風化豈淺鮮哉

雍正八年歲次庚戌九月

太子少保兵部尙書兼都察院右副都御史總督浙江等處地方軍務兼理糧餉營巡撫鹽政節制江南江蘇松常鎮淮揚七府太倉海邳通徐五州督捕事務加六級紀錄一次又軍功紀錄一次在任守制李衛題



ARTICLE III.

NOTES ON THE NORTH OF CHINA,
ITS PRODUCTIONS AND COMMUNICATIONS.

By REV. A. WILLIAMSON, CHEFOO.*

IN the course of duty having been engaged, less or more, for three years in travelling over the north-eastern provinces of China, it appears only right that I should give some account of these districts so rarely visited by Europeans, especially in view of the urgent demand from all quarters for trustworthy information from the interior of the Empire. And I am the more disposed to do so at present in as much as I have just completed a long journey of 1750 miles going and returning in company with my friend Mr. Lees of Tien-tsin, through the provinces of Chili, Shan-si, Shen-si and part of Honan, and have observed several things of some importance relating to the resources of the country, the river and road communication, and the internal state of this quarter of China.

COAL.—At different times and through diverse channels information has reached foreigners residing on the coast, of coal in the neighbourhood of Peking, and on the east coast of Manchuria. Not long after the war, Lieut. Howarth, then commanding H.M.'s gunboat *Weazel*, and Mr. Brown, of the Legation at Peking, were deputed to examine the coal-fields near the capital. They visited two districts—one lying on the north and the other on the west—and gave us a very favourable report. They affirmed that there was coal of a very fair quality, and apparently unlimited quantity; that one of the districts had water communication all the way to the sea and the other two-thirds of the way; and that coal could be laid down at Taku at a very moderate price. A writer in the *Quarterly Review* for April, 1866, page 444, says, "We may state that, having examined coal, including lignite,

*Read before the Society 13th March and 18th April, 1867.

from nearly every part of the world, we have seen no steam coal superior to that from the neighbourhood of Pekin, where it is reported that a magnificent coal-field exists, not less than three hundred miles in extent. This report is founded on a personal communication from a geologist who has spent three years in the exploration of that coal-field." The geologist referred to is, I presume, Mr. Pompelli, who explored the coal-field near Hankow, and that in the north and west of Chi-li, and went overland through Siberia to Europe, and has lately published an account of his researches. But be this as it may, the manifest attainments of the writer of that article, and the character of the periodical, are a sufficient guarantee for the veracity of the statement, and hence it may appear an impertinence on my part to add one word more in reference to that field. But as two witnesses are better than one—no matter how intelligent and trustworthy the former may be—and as I have recently visited districts from which I believe Mr. Pompelli had only reports, a few remarks from me may not be deemed superfluous before proceeding to other matters.

In the autumn of 1863, travelling from Dolonor in Mongolia, I came upon coal at Kalgan, and found it at almost every place from that frontier town on to Pekin. The coal came for the most part from a fine hill called Ki-ming-shan, lat. 40 deg. 28 min. N., long. 115 deg. 20 min. E. I spent a day in the neighbourhood of the place and made some enquiries regarding the matter, and found the coal good, and plentiful, and cheap.

In the spring of the year 1866, journeying from Newchwang in Manchuria, I met coal at King-chow, lat. 41 deg. 9 min. N., long. 121 deg. 21 min. E., and also found it in common use, at almost every place between that city and the capital. The coal in this quarter came from several places. Some came from near King-chow, some came from the neighbourhood of the palisades, about 40 deg. 45 min. N., long. 120 deg. E.; and some came from Chang-li, lat. 39 deg. 48 min. N., and long. 119 deg. 12 min. E. I know not from what points Mr. Pompelli took his estimates, but if the reader will look at the map, he will find that from Kingchow to Ki-ming-shan there are more than five and a-half degrees of longitude, which shews that his statement is correct. I brought some specimens of the coal of these eastern

parts home with me, some of which were pronounced most excellent coal.

In this connection I may also mention that capital coal is found in Manchuria, 18 miles east from Liao-yang, lat. 41 deg. 18 min. N., long. 123 deg. 13 min. E.; at Foochow on the coast quite close to the sea, lat. 39 deg. 42 min. N., long. 121 deg. 33 min. E., which coal is carried by junks to Shan-tung and distributed all over the eastern part of the province; also that coal is found at Poissiet; and here and there all up the sea-board of Manchuria under Russian protection, and that very fine coal is likewise to be had in the Island of Sagalien, from which the Russians supply their steamers.

COAL IN SHAN-SI.—There is yet a still finer field of coal in the north of China—mentioned in old Jesuit books, but apparently quite forgotten in modern times; as I have never heard any reference to it in my intercourse with foreigners, nor seen any allusion to it in published reports: and it is this and the iron found there which chiefly induces me to write at present. I refer to Shan-si. I made a journey through that province and part of Shan-si and Honan last autumn; and though prepared from native sources to find coal there, I certainly did not expect to find it in such abundance and of such magnificent quality. As we approached this province, the first indication we met was pack-horses, mules, and asses innumerable, no end of them, laden with coal and iron coming eastward towards Chi-li. By-and-bye we came upon inferior coal cropping out on the waysides, and at last got into the very heart of the coal country. This district may be said to begin at Tsing-king-hien, and to continue to Sey-lieh, a village 12 miles east of Tai-yuen-foo.

At this city, viz: Tai-yuen-foo, another coal district may be said to begin, which reaches on to Ta-foong-foo in the north of the province, yielding beautiful coal.

A third coal district lies in long. 110 deg. 45 min. and between lat. 36 deg. 50 min. and lat. 37 deg. 30 min. N.

Another coal district may be said to lie towards the west in the neighbourhood of Tai-ping-hien, lat. 35 deg. 52 min. N., and yet another in Shensi, contiguous to the north-west of Shan-si, within that great bend of the Yellow River, in lat. 37 deg. 50 min. N., long. 110 deg. E., near the city of Mi-tze-hien. Here, moreover, we are told petroleum is in common use among the people. *Thus coal is found nearly all over Shan-si, whose area is 55,268 square miles.*

To shew how plentiful it is, I may mention that travelling through mountain-passes towards Tai-yuen-foo, at almost every road falling into the Imperial highway from the north, we found donkeys laden with coal, and also on our way through the Tai-yuen plain, going southwards, on the right hand and on the left we found coal pouring in, shewing that it literally abounded. One district in particular struck us, namely, that in lat. 36 deg. 50 min. to 37 deg. 30 min. N., long., 111 deg. 45 min. E. Leaving Chee-shui-hien a few miles brought us into a fine country watered by the river Fuen, which extends for 130 *li*, or 38 English miles, and appears to be full of this mineral. At first on the western side we saw pit after pit, collier villages, and all the accessories of coal mining on the hill sides; and having proceeded onwards a little we found them also at the eastern side, on which our road lay, and passed them at greater or lesser intervals till we came to Ling-sz-hien. Three miles beyond this we had to cross the famous Han-sing-ling Pass, and from the top of the mountains we could descry coal cropping out on the hillsides all around, just as if courting the hand of man to come and take it. This place was particularly interesting—a very paradise for geologists. Like another valley near Ping-ding-chow, there was a great variety of coloured earths exposed to view, and as many of the hills were cut through almost perpendicularly, and the strata beautifully distinct, the various colours in the sunlight reflected all the hues of the rainbow.

Of course we could not visit all the coal mines in the different districts, but we constantly enquired of the muleteers where their coal came from? the price of it? whether it was plentiful? &c., and generally got a sample of it from them to carry home. And also when resting in the inns we made it a duty to examine the nature of the coal used for cooking and other purposes, and to ascertain all the particulars regarding it.

We visited several of the pits in the neighbourhood of Ping-ding-chow, and also in the third district referred to.

As I said, I shall not enter into any details, but sum up.

Throughout Shan-si we found two distinct kinds of coal—one of a dullish black colour, rough and emitting smoke, good bituminous coal; the other of a clear, shining black, light, easily igniting, but emitting no smoke and leaving no ashes. It is not coke, but a natural product, they called this coal *charcoal*; many of the pits are *ingoes* entering the hills horizontally at a greater

or lesser incline, but a large proportion are vertical pits substantially faced with stone and wrought by strong windlasses; some of the former were said to be one $\frac{1}{2}$ or one third of an English mile in length, and the latter sometimes as many as 200 feet deep.

Generally speaking, the seams of coal appeared to be of a great thickness all over the country. The blocks piled up at the mouths of the pits, the great pieces on the backs of the mules, in many cases three pieces serving for a full load, and two pieces for a donkey—and the huge lumps which we often met in the plain, on the carts, which it would take two men to lift, are the best proofs we could have of this. At one of the pits we visited we were told that the seam was from three to four feet thick, and this we believe to be about the average. We made enquiries as to fire damp; they said it was unknown in the midland districts, but there was fire in some of the pits in the north; that the great enemy they had to contend with was water, for having dug in a certain length or down a certain depth, water came up and stopped all operations, and they had to open a new mine in another locality.

But perhaps the most conclusive proof of the abundance and easy accessibility of the coal in the price. This, of course, is varied in proportion to the distance from the mines, but at the pit's mouth we found the price in all the districts ranging from 50 to 70 cash *per picul*, or 2*d* to 3*d* per cwt. for the best coal. In view of their rude way of working, this speaks volumes. In addition to the black coal just described we found abundance of brown coal both in Chili and Shan-si. This coal they burn with the black, especially with the kind called coal-charcoal; this latter prevents it burning away too rapidly and retains heat after the former is all consumed. Several varieties are found, some of a light brown, and others of a reddish brown, and it in many places costs nothing but the carriage. There are great quantities of this in the district of Ping-ding-chow, and also at Ling-sz-hien.

Whether it be of any great use must be determined by practical men.

IRON IN SHAN-SI.—Not only have we coal in Shan-si, but abundance of iron, a fact likewise apparently quite unknown to Europe. This mineral is found in many places throughout the province, but there are four districts especially famed for it. The first is the district of Ping-ding-chow, formerly referred to above

as producing coal, in which are the cities of Yu-hien, lat. 38 deg. 12 min., long. 113 deg. 15 min., and Lo-ping, lat. 37 deg. 39 min., long. 113 deg. 45 min., where iron-ore mines abound. The next is the neighbourhood of Tai-yuen-foo. Here outside the east gate and at the hills 13 miles to the N. W. are iron manufacturing. Towards the west of the province in the district of Tai-ping-hien, lat. 35 deg. 52 min., are also great quantities of iron.

But the most famed district is that of Loo-ngan-foo, lat. 36 deg. 7 min. N. The mines here produce the iron of which the Chinese make their razors, knives and cutlery: this iron is in request all over the country, and it appears to be as plentiful as it is famous, perhaps its fame is the cause of its abundance, inducing the natives to mine it to a greater extent. An intelligent blacksmith whom we questioned on this point said that at Tai-ping-hien and Yu-hien there was a good deal produced, but not to be compared to Loo-ngan-foo; that at this city you could always get as much as you wished, that it was "*to to li hai*," literally in "frightful lots." But besides these districts and others mentioned in Chinese books I am persuaded that iron exists in many quarters not yet known to the Chinese, or, if known, not deemed by them worth working, owing to the abundance and cheapness of that already in the market. We found iron-ore in several places other than where it is manufactured. Leaving Ping-ding-chow, and passing toward Tai-yuen-foo, we found black iron-ore in the bed of the mountain-torrent. Travelling southward toward Ling-sz-hien we found iron-ore among the stuff at a chemical work on the way-side, and large lumps of rock full of sulphur, &c. And yet more important, as we entered the city of Ling-sz-hien from the east, we passed a walled enclosure provided with a gateway, marking the place as of some notoriety. We entered, and there we found a stone standing perpendicularly, carefully set in a substantial socket, having a vase for incense before it and a temple behind it. It was about 5 feet high, 3 feet wide, and 18 inches or so thick in the centre. To our surprise we found it to be a huge block of iron-ore, in fact, nearly pure iron. We examined it most carefully, we struck it with several articles, and it rung out like bell metal. The tablet at the side of it said it was found by the Emperor Sui-kai, in the 10th year of his reign, in the bed of the river Fun, which flows through the valley; that it was deemed such a curiosity by the great Emperor Kang-hi

that he ordered it to be placed in its present position and called the name of the city "Ling-sz-hien, or the Spiritual Stone City," in honour of it. It may be meteoric in its origin, though we think this improbable; we are far more inclined to believe, in view of the highly metalliferous nature of the district, that it is only a portion of some fine vein of almost pure metal, such as is to be found at Canaan in Connecticut, or part of an iron hill such as is in Missouri.

Much of the iron produced in this province appears to be of a very superior quality. The bars of welded iron have that blue shade indicative of strength and toughness. They are fine in their grain, and when struck ring like bells. I brought specimens home with me of the iron of the different districts; several merchants and others acquainted with metal pronounce the quality excellent. A friend took possession of them, and specimens of other minerals, and sent them to the Paris exhibition.

M. Giquel, of the Imperial Customs, in his report on the Trade at Shanghai for 1865, says of iron:—"Some is to be had of excellent quality, indeed, a certain kind coming from Tien-tsin (Pe-chi-li), and Wan-chow (Che-kiang), do not yield in any respect to the best Swedish iron; and we know that a sample which was sent to Leeds some time ago was returned to China in the shape of a vice perfectly polished, and upon which could be easily discerned the fine fibres of the metal, which was declared to be equal to No. 2 Swedish iron." There can be little doubt this sample from Tien-tsin was Shan-si iron; for there is no iron produced near that city, but it derives nearly all its supplies from this province.

The price of iron in Shan-si greatly depends upon the distance from the mines, as mule hire is so expensive; but the best Loongan-foo wrought-iron bars can be purchased at that city for about 2,800 cash per picul, or little over Tls. 2; in English rates about 12s. per cwt. This tells its own tale.

But the production of iron in the northern provinces is not confined to Shan-si; we have it in several places in Chi-li, though not so abundant. It is said to be found at Chang-li-hien, lat. 39 deg. 50 min. N., long. 119 deg. 20 min. E.; at Man-lan-a-jim, lat. 40 deg. 20 min. N., long. 117 deg. 30 min. E., and at other places. I have met it outside the Great Wall coming from the neighbourhood of the Hi-fung Pass.

There are also iron mines in Manchuria in juxtaposition with the coal mines already referred to, 18 miles to the east of Liauyang, lat. 41 deg. 18 min. N., long. 123 deg. 13 min. E. They supply all that district with iron utensils and are famous all over the country.

GOLD.—This is found in several places in the north of China, Manchuria and Mongolia. Before the rebellion in Shen-si it was obtained from the sand of the rivers and streams of that province, especially in the neighbourhood of Lan-chow. The Jesuit fathers tell us that an infinite number of persons made their livelihood by searching the sands of these rivers. Gold is also procured in considerable quantity in Mongolia and in the centre and on the sea-board of Manchuria. We have seen a sample of several ounces from the neighbourhood of Poissiet which very much resembled Australian gold.

SILVER.—We have been asked where does all the silver come from which is shipped in such quantities from Tien-tsin. We have not been able to arrive at a definite solution of the problem. Doubtless a large portion of it is due to the commerce and Government of the country, but there must be important silver mines some-where in the north. A passing traveller can see coal and iron, and such bulky and cheap minerals, but it is somewhat difficult to discover the locality of the precious metals. We have little doubt but that there is plenty in Shan-si, but while there we could only hear of one place about 60 miles north of Tai-yuen-foo which produced silver.

We believe that large quantities are being found just now by the Russians in the Altai mountains.

TIN.—This metal is said to be found in the country of the Karchin tribes in Mongolia.

LIME.—Several varieties of most excellent limestone abound all over Shan-si, as well as though less plentifully in the other provinces.

EARTHS AND CLAYS.—In the province of Shan-si near Pingding-chow we found the people manufacturing porcelain and crockeryware of several descriptions. The porcelain was comparatively coarse, but seemed capable of great improvement. Here also, as well as at Po-shan-hien in Shan-tung, we found them making a species of earthenware of a very strange description. It is very thin and brittle, and looks in colour like a black-leaded pot, but is extremely light. Very little fuel and almost no time serves to

cause it to boil, and hence it is in great demand all over Chi-li, where the poor have to depend upon straw and dried grass for their fires. This ware is also made at Loo-ngan-foo. In the neighbourhood as well as in many other places we found fullers earth and clays in great variety used for all sorts of purposes.

MARBLE.—In the north of Shan-si we have plenty of fine marble of various colours, and also a variety beautifully veined among the hills on the north-west of Chi-li. As well as in Shan-si, we have white marble in great abundance. We were told of some hills of solid marble.

BUILDING STONES.—Of this commodity in the hilly districts there is literally no end.

PRECIOUS STONES.—In reference to these we can only speak from report; but were assured that in Shan-si, and among the hills in the south of Shen-si, precious stones, such as *lapis lazuli*, ruby, &c., &c., abound, and we have every reason to believe the report correct.

SULPHUR AND SALTPETRE.—There is plenty of Sulphur in Shan-si and Saltpetre in Chi-li.

COTTON.—In several districts in the north of China Cotton is grown in considerable quantities, and could be produced much more extensively. In reference to Chi-li it may be said to be raised all over the province under the 39th degree of latitude. In the southern half of Shan-si it abounds; after crossing the Han-sing-ling Pass, lat. 36 deg. 30 min. N., we found it every where. Having crossed the Yellow River at the Toong-kwan, lat. 34 deg. 49 min. N., long. 110 deg. 40 min. E., and having entered Shen-si, we found this important staple growing all over the country on to Si-ngan-foo, the capital of the province; returning homewards through the north-west corner of Ho-nan we travelled through field after field and in many places there was nothing but Cotton as far as the eye could reach.

Nor is it a stranger in Manchuria, far north though this be. Cotton grows on the slopes of the hills to the east of Moukden, lat. 42 deg. 20 min., long. 123 deg. 30 min. E., and even further to the north-east in the direction of Kirin. We also found the farmers sowing it over a considerable area in the neighbourhood of King-chow, lat. 41 deg. 10 min., long. 121 deg. 8 min., and all along that belt of country which lies between the hills and the sea from the above city to Shan-hai-kwan.

In these provinces there are several varieties. In Shansi there are two distinct kinds—one with a reddish tinge and one pure white. We brought samples home with us, and the white Shan-si Cotton was pronounced much finer in colour and longer in the staple than that commonly obtained at Tien-tsin or Chefoo. The natives themselves remarked this—they said “your Cotton in Chi-li is hair; our’s is wool.”

On our way home from Shen-si and through Ho-nan we met literally tremendous quantities of cotton on its way to Si-ngan-foo, there to be manufactured for the Shen-si and Kan-suh people.

We tried what we could to obtain reliable information regarding the cultivation of this plant, but were not quite satisfied with the results of our enquiries. There was, as might be expected, considerable diversity in the amount of seed sown and the yield. In some places we were told that they used only four lbs. of cotton-seed to a mow which is the sixth of an acre; and in other places from five lbs. up to eight lbs. to the mow. In some places we were also told that the yield was only about 100 lbs. of cotton-tops per mow and from this they obtained 40 lbs. of good cotton-wool and 60 lbs. of seeds, while in other places we were assured that they obtained as many as 300 lbs. to 400 lbs. of cotton-tops per mow in a good year, from which they obtained 30 lbs. of clean cotton and 70 lbs. of seeds in every 100 lbs. of tops.

One thing we are clear about and that is, that the quantity of the yield, and the quality of the wool could be very much improved by greater care in the cultivation. They do not irrigate it, very seldom water it, and sometimes even plant it without manure. In many places the seed is put in after a spring crop has been lifted. I have observed that the seed was in some cases buried in manure before planting.

They use the seeds for oil, and the refuse, they employ as food for cattle. The seeds sell for 30 cash or 40 cash per lb. or from $1\frac{1}{2}d.$ to $2d.$ per lb.

The soil is possessed, in general, by small proprietors who cultivate from five to twenty acres. They pay a land-rent to the government of 400 to 450 cash per acre, or $20d.$ to $22\frac{1}{2}d.$ in English money for good ground. Large proprietors who let their land either receive a certain rent, or a certain proportion of the produce according to agreement. The usual wages paid to

farm servants in Chi-li is 15,000 cash per annum or about £3 10s. together with their food.

Another means of improving the crop would be the introduction of foreign seed from America or elsewhere. As far as I know this has not been tried in the north of China, but I understand that a small planter in the north-west of Shan-tung, has sent for a quantity to be planted next spring. Let us hope this is only the beginning of better things.

I am not sure but north China may be as a position to return compliment by sending seed which may be of some value to Europe. You will observe that Cotton is grown here in latitudes 40°, 41°, 42°, and 43° north, of a very fair quality: for the Manchurian cotton is all in these districts. I do not know of it being grown in any other part of the world in such high latitudes, and so it is very probable that seed from these places might grow with success in many places in central Europe. Though the staple be short we know it makes most excellent strong cotton, and machinery could easily be adapted to meet that difficulty.

SILK.—This is cultivated in several districts in the north of China; worms are reared in Manchuria on the hills to the north-east of Newchwang, from which the strong Pongee is produced (see Consul Meadow's able report.) They are also reared in the neighbourhood of King-chow, long. 121 deg. 8 min., lat. 41 deg. 10 min. Many of the Shan-tung manufacturers go over to these places and buy the raw silk exposed for sale in the fairs, and take it home to be spun and woven.

Nor are they without the mulberry-tree in these regions. A friend found orchards of them near the large town of Pa-kow, outside the great wall, south-east of Ze-hol.

WOOL.—Of wool and camels' hair there is an unlimited supply. If you take a map and look over the north and north-west and north-east you will find the country covered with such uncouth names as these—Tow-mets, Tsa-khars, Kor-chin Cha-léts, Tour-betts, Omi-outs, Kar-chin, &c., &c. These are names of tribes which are nomadic and pastoral. Their flocks of sheep, oxen, horses, and camels are innumerable. They are now inclined to trade with us, and no doubt would be much more desirous were they better acquainted with the advantages of commerce. Here then we have wool *ad libitum*, and camels' hair to any extent that can be desired.

We know that the wool of this sheep is somewhat coarse, but this could be remedied by the introduction of sheep from Europe or Australia. We also know that the camels' hair which has up to this time found its way into the European market has been inferior; but this has resulted from the knavery of the Chinese, who have as yet to be employed as middlemen. Were the European merchant to have access to the producing districts I have no doubt excellent camels' hair could be procured in abundance.

The wool to be had in the west of Shen-si is very superior.

HEMP.—This valuable plant is grown in almost all the places I have visited in this quarter of China. Some of it is very valuable and may come to be an article of export.

CHINA-GRASS.—This grass which has created some sensation in France, is cultivated all over these provinces, and should it ever come to be of value in the foreign market could be produced in any quantity.

RICE.—There are two kinds of rice grown in these districts. One the "wet soil rice" such as is common in the south. It is reared plentifully near Pau-ting-foo. The other kind is rather peculiar. It is called "dry soil rice." It is sown in spring just like wheat and never irrigated. It abounds all over the country, and the rice is white and wholesome.

PULSE.—Is grown every where and used for many purposes. They mould it into cakes called beancakes which form the principal article of export to the south, where it is used as manure for the sugar cane. They also manufacture this species into a bean-curd which is a favourite food, not only in the north but also south of the Yang-tze-kiang. Of the various kinds of millet I need say nothing.

OATS.—This grain is found in the north of Shan-si, in Mongolia, and also in the east of Manchuria.

VEGETABLES.—Of vegetables there is no end. We have cabbage, turnip, carrot, vegetable marrow, melons, cucumbers, onions, tomato, lettuce, celery, beetroot, spinach, &c., &c., and what will please Europeans best, most excellent mealy potatoes; they are grown in the eastern parts of Shan-tung, in Manchuria, and we also found them to our delight in the northern half of Shan-si. It may interest some to know that we found wild raspberries and strawberries in Shan-si, and also a species of blaeberry on a good sized bush, and not on a low shrub as in Scotland.

DYES.—We have a variety of good dyes. We have indigo, madder and two kinds of yellow dyes. One produced from the seeds of a tree called the *Whysloo* very much resembling our common ash. We have also a fine deep red, from the flowers of a pretty annual, and other dyes of less importance.

The shrub which produces the famous *green dye* is found plentifully in the centre of Shan-tung.

HERBS.—Manchuria and the north of Shan-si have long been famous for medicinal herbs. Preeminently among them stands that remarkable tonic Ginseng or jên-seng which is a native of the hills on the east of Manchuria and Corea, and which is not known as it should be.

Curiously enough we have in Shan-tung a shrub, not unlike the privet, from the leaves of which they make tea; which is exported to the south of China and also said to be in great demand in the capital. It forms a very wholesome and not unpleasant drink.

CLOVER.—Clover is cultivated for fodder both in Chi-li and Shan-si.

The whole of Chi-li, except a small strip on the north and west, the eastern side of Ho-nan, the western part of Shan-tung, and the southern border of Manchuria, all form portions of that great alluvial plain which extends down to *Hang-chow-foo*. The aspect of this portion of China varies immensely with the season of the year. In winter the country is bleak and barren, scoured by cold winds carrying blasts of sand which penetrate everywhere, and the eye is relieved by nothing more picturesque than crowds of graves, and mud villages, and Chinamen hurrying hither and thither with padded clothes, and their hands stuffed up their sleeves. In spring the change is wonderful: the whole country is covered with green fields of wheat, the canals and slow-flowing streams, now relieved of their fetters, are enlivened with innumerable sails, and freedom, joy, and activity everywhere prevail. But in autumn the change is most marked; you can hardly believe it to be the same country; the luxuriant crops, the tall millet far above your head, through which you travel as in a young wood; the sturdy Indian corn, the cotton fields, the endless varieties of vegetables, and the profuse richness of the earth form a contrast almost too much for one's credulity. Yet so it is; the fertility of the soil is extraordinary. The other portions of the north of China are very different. The eastern portion of Shan-

tung, the western side of Ho-nan, the great part of Shan-si, the whole of Shen-si except a plain about the centre, are varied by mountains and valleys, hills and dales, rocks and streams, crystal springs and bounding rivers. This is particularly true of Shan-si. In this province the valleys are far more extensive, and far more fertile, and the hills less bleak than in Ho-nan and Shan-tung. Here they are generally terraced by regular walls up to the very top, and the summits are often crowned by trees; the valleys are full of flowers, among which we met the bluebells, pinks, &c., and a variety of familiar plants, so that it was a perfect enjoyment to travel in this quarter; excepting that the ravines were often so appalling and the road on their edge so perilous that our thoughts were often occupied attending to less pleasant matters. In the north of China we have the extremes of temperature; and the climate is not unhealthy. The best proof of this, though rather a queer evidence, is the old Portuguese and Jesuit grave-yards at Peking. Here we find from the headstones that the fathers have lived 30 and 40 years in this part, even in the case of some who came to China comparatively late in life; and the next best proof is the excellent health enjoyed by the foreign communities in Peking, Tien-tsin, New-chwang, and Che-foo, comprising people of all nationalities. There is remarkably little disease among them.

THE GREAT CITIES.—In this connection I shall only say a very little in reference to the great cities, and nothing at all about Peking, Tien-tsin, and Tung-chow, &c., inasmuch as they have been described sufficiently by others; nor shall I refer to any but those visited by me. *Pau-ting-foo*, lat. 38 deg. 58 min., long. 115 deg. 26 min., the capital of Chi-li, next to Peking in importance in this quarter, is a compact and crowded city, the streets all well laid out, full of good shops filled with valuables of all descriptions, among which we saw a good proportion of book-shops, which speaks well for the literary taste of that district. It has its temples like others, and a bell and drum tower. It is famous for the manufacture of carpets. *Ching-ting-foo*, lat. 38 deg. 14 min., long. 114 deg. 35 min., is a large city, but has only one busy street, running from east to west, and rather disappoints the traveller. It has some extraordinary bronze idols, one about 60 feet and another about 72 feet high, which I shall not attempt to describe in this connection. *Tai-yuen-foo*, lat. 37 deg. 58 min., long. 112 deg. 30 min., the capital of Shan-si, is a

very pleasant city. It stands at the north end of a most fertile valley, and has hills on each side of it at the distance of a few miles. It was formerly the residence of the Princes of the Taming dynasty, and is laid out after the fashion of Peking. It has its miniature public offices and Mae-shan. The streets are regular, wide, and full of good houses. Book-shops are less prominent here than in Pau-ting-foo. There is an Imperial foundry for artillery, match-locks, &c. The trade is comparatively extensive. Many fine quasi-turkey carpets are also made here.

Ping-yang-foo, lat. 36 deg., long. 111 deg. 38 min. This was the first capital of China, the seat of the old Emperor Yaou, who began his reign B.C. 2356. It has continued a most important city ever since, but has suffered greatly from the Tae-ping rebels. It is reviving, though ruins even yet everywhere meet the eye. There are large paper manufactories in the neighbourhood famed all over the country. They are reported to supply Peking with all the fine paper.

Si-ngan-foo, lat. 34 deg. 26 min., long. 108 deg. 50 min. This city is the capital of Shen-si and stands in a large plain or tableland, with mountains in sight only on the south and north. It was the capital of the Empire for many centuries both before and since the Christian era, and possesses features of intense interest to the Chinese scholar. Although the country all round has been devastated by the recent Mahomedan rebels, this city still stands intact, though shorn of its business and much of its glory. Like the other large cities, its streets are regularly laid out, and were once well paved. They are narrower than those of Tai-yuen-foo, but the shops present evidences of having had even greater trade than in the Shan-si capital. There are several famous temples here: the site of the palace of the Tang dynasty is still to be seen. There is also an extraordinary museum of tablets of many eras, two old pagodas, &c. But the most interesting thing to us was to find the old famous Nestorian tablet, telling of the introduction of Christianity into China in the seventh century, in a ruined temple outside the west gate. It is still perfect, though all around is desolate, and let us hope will continue to be preserved.

Ze-hoh or *Je-hoh*, lat. 41 deg. 4 min., long. 117 deg. 50 min. This is the summer residence of the present Tartar dynasty. Its situation is certainly most beautiful! it lies in the midst of a circle of high hills towering one above another, till ultimately

lost in the clouds. The palace is enclosed by a great wall, and outside are the finest temples I have seen in China. There are immense hunting-grounds in the neighbourhood, where tigers and wild beast abound.

Siu-en-wha-foo, lat. 40 deg. 38 min., long. 115. This large city is now occupied in a great measure of trade. It was the summer residence of the Yuen dynasty, and has fine parks full of grand trees on the western side. It is now chiefly famous for the manufacture of excellent felt. They will make a felt hat of any shape in a few minutes.

Kalgan, lat. 40 deg. 54 min., long. 114 deg. 50 min., or *Chang-hia-kow*, as the Chinese call it. This city is one of the frontier towns, through which the commerce of China passes to Mongolia, Central Asia, and Europe, and the chief among them. It is situated at the foot of the great incline which leads up to the Mongolian plateau, is strongly fortified, and commands a great amount of business. The place is famous for the manufacture and export of native soda. It is a double city; the inner being more retired, while the outer is filled from morning to night with troops of Mongols. The Russians have several agencies here, and from this point distribute their imports all over the country.

Dolondo or *Lama Miao*, lat. 42 deg. 40 min., long. 115 deg. 20 min. This city is situated on the plains of Mongolia, in the neighbourhood of lakes, about 130 miles from *Kalgan*. It is a large and busy place, surrounded by mud-walls; here Chinese traders meet the Mongols and barter groceries and cloth for wool, camel-hair, hides, tallow, &c. While there we found immense native godowns full of the above commodities, indicating a most extensive trade. Here also they purchase camels, oxen, and horses, which they sell on their return home all over the North of China. Two or three miles from the city are extensive Lama temples, where there are several thousand priests and where the rites of that system may be seen carried out daily in all their details, and in all their pomp.

Shan-hai-kwan, lat. 40 deg., long. 119 deg. 50 min. This lies at the extreme end of the Great Wall and only three or four miles from the sea. It may be said to consist of three cities, a central one, and one on the east and west, besides suburbs. It is the great gate through which all merchandize for Manchuria and Corea must pass. It stands in a good position and is naturally strong.

King-chu, lat. 41 deg. 12 min., long. 121 deg. 10 min. This lies not far from the sea, and is the seat of considerable distributing trade through the western portion of Manchuria. It is a well-built city, and has carts for hire like Peking.

Toong-kwan, lat. 34 deg. 50 min., long. 110 deg. 5 min. This important fortress stands at the southern bend of the Yellow River on the Shen-si side. It lies on the slopes of the hills, has the river on one side and mountains on the other two, and so could be made almost impregnable. There is some business done, but its chief importance lies in its military position. It is called the Key of Shen-si.

THE RIVER AND ROAD COMMUNICATIONS.

THE YELLOW RIVER.—Next in importance to the resources of a country are its facilities for the transportation of goods, hence one of the first questions put to me on my return to Tientsin was, "What about the Yellow River? is it eligible for the conveyance of goods to and from Mongolia?" This question is very difficult to answer, and could only be satisfactorily determined by a civil engineer investigating its whole course. We crossed it at two different places, one lat. 34 deg. 49 min., long. 110 deg. 40 min., the other lat. 34 deg. 51 min., long. 112 deg. 20 min. We travelled parallel to its banks for three successive days, and made all the observations and inquiries we could. At the first place it was comparatively narrow—not more than 400 yards across, and the current was very strong. The other place was a sort of gorge, and the current still stronger. On our way along its banks we observed it sometimes spreading out into a broad stream, with currents here and there, as the case might be, and at other times compressed into a fine majestic rapid-flowing river. We saw a great many huge flat-bottomed boats laden with coal, from the north of Shan-si—some from places about 200 miles distant—floating on its waters. They came down the stream at the rate of 60 miles *per diem*, but only averaged 13 or 14 on their upward course. One Chinese traveller affirmed that it was navigable all the way round to Ning-hai, lat. 39 deg. long. 106, and even further, while others affirmed that it was navigable

with ease and safety only in certain parts of its course. My own impression is that the latter statement is the correct one, that it winds its way alternately in rapids and shallows, and that there are several portions where navigation is difficult. As far as relates to the rapidity of the current, I think a paddle-wheel steamer or a steamer with a strong stern paddle could easily make its way up. Surely there can be no shallows beyond the reach of modern science and engineering. One of the Jesuits speaks of a "cataract," but I am not sure what he means. I could hear of none in the sense of a great fall over a precipice, though there may be such. All the obstruction of this nature that I could hear of was a gorge with three mouths between Ho-nan-foo and Kai-fung-foo. The mouths were called respectively "God's Mouth," "Man's Mouth," and the "Devil's Mouth;" and we were informed that it was quite safe if you could guide your boat through "God's Mouth;" that the passage through "Man's Mouth" was somewhat doubtful; but if you were carried into the "Devil's Mouth" it was certain destruction. Passing Kai-fung-foo, the river flows a short distance eastward, then it leaves its old bed, spreads out into a sort of lake, and takes a northward course, flowing past Tsao-chow-foo on to the Grand Canal, where it takes possession of the bed of the river called Ta-tsing-ho, and through this channel pours itself into the sea. Perhaps the introduction of railways may supersede any desire to place steamers on this river. Certain it is, however, there would be no great difficulty in steamers entering by its new mouth, coming up past Tsi-nan-foo to Tong-ho, lat. 36 deg. 25 min., long. 116 deg. 23 min., on to Tung-chang-foo, and thence to the Grand Canal.

THE HAN RIVER.—The river next in importance to the Yellow River is the Han-kiang or the Han River, which flows into the Yang-tsz-kiang at the city of Hankow, or the Mouth of the Han. This river rises in the south-western portion of Shen-si, and makes a zig-zag course through the south of that province and the centre of Hu-peh. It is wide and deep, a great broad river more like a principal than a tributary, and navigable for good-sized boats as far as Hing-ngan-foo, lat. 32 deg. 30 min., and long. 110 deg., while junks can easily reach Yun-yang-foo, lat. 33 deg., long. 111 deg. 20 min. It receives several important tributaries, such as the river Tan-ho, which falls into it about lat. 32 deg. 30 min., long. 112 deg., and the Pih-ho river, both of which

are navigable for a long distance. From time immemorial it has been one of the great water roads of China, and is repeatedly referred to in their historical annals. In consequence of this there are a number of famous cities and large distributing towns on either bank, such as the cities of Fan-chung, Seang-yang, E-ching, &c., besides those mentioned above. Through means of this river and its affluents, Hankow supplies Hu-peh, Ho-nan and Shen-si with foreign commodities and receives their produce. At Si-ngan-foo we found goods from Hankow; and also met Chinese travelling from Shanghai, who had come per steamer to Hankow, thence per boat to a place called Loong-kui-tsai, from which there is a mule-road of four or five days' journey to that city. This shows that there is no hope of Tien-tsin competing with Hankow in supplying this part of China. We fully intended to return to Chefoo by this route, but circumstances led us to prefer the road *via* Ho-nan, in the hope of visiting Kai-fung-foo. See also Mr. Wylie's notes in the *Foochow Missionary Recorder*.

RIVERS IN CHI-LI.—In the province of Chi-li there are three rivers which demand some notice in this connection, besides the Grand Canal, of which I spoke in a former paper. There are the *Pei-ho*, the *Shang-si-ho*, and the *Poo-too-ho* (wrongly spelt on the common maps Hoo-to-ho). Regarding the first I shall say nothing, as it is well known as the river by which Pekin receives a great proportion of its supplies. The *Shang-si-ho* may be said to rise far west on the borders of Mongolia and on the north of the Province of Shan-si (though there it has other names), and only takes the name *Shang-si-ho* between the Lake of Pau-ting-foo and Tien-tsin. It receives a great many tributaries. Out of these the *Wang-niu-ho* or *Lu-li-ho* rises at the hills west of Pekin, and becomes navigable for good-sized flat-bottomed boats near the celebrated coal districts of Fang-shan-hien. Passing through that place we found coals piled up in yards on the banks of the river (just as at railway-stations at home), and boats there to take them to Pau-ting-foo and Tien-tsin. We found that were it not for exorbitant export and transit duties, coal could be laid down at Tien-tsin for about Tls. 3 or 4 per ton. This river is a great means of transit between Tien-tsin, Pau-ting-foo, and the west of Chi-li. The other river, viz: the *Poo-too-ho*, rises at the north of Shan-si near the centre of that province, and flows south, like the former receiving many tributaries. We saw a good deal of this river. There

were a great many corn-mills on it in Shan-si, and we found many places where huge reservoirs could be made with very little expense. This river does not become navigable till it reaches Ho-kien-foo, where it turns towards the north-east, and flows in the direction of Tien-tsin, where it like the Shang-si-ho falls into the Pei-ho. It aids in supplying the central districts of Chi-li.

SHAN-SI AND SHEN-SI RIVERS.—There are several other rivers in the north of China which have been an enigma to us for long, as we never could obtain satisfactory information regarding them. Judging from the maps, they look of some magnitude, and in that case of great importance, as their courses lie through rich and populous districts. We refer especially to the *Fuen-ho* or *Fun-ho* in Shan-si, the *Wei-ho* in Shen-si, and the *Lan-ho* in the east of Chi-li. The river Fuen-ho rises near Tai-yuen-foo, and flowing southward falls into the Yellow River. We fully expected this to be fit for boats, but, to our indignation shall I say? we found it only a huge mountain torrent, in the greater part of its course full of large stones and boulders, and utterly impracticable for navigation. The other streams in Shan-si are all similarly unnavigable. The Wei-ho in Shen-si has a course of nearly 400 miles, passes Si-ngan-foo and like the other falls the Yellow River. The country being flat here, we thought, surely this river must be of some value for transit, but were sadly disappointed; we found it a slow shallow stream flowing over a sandy bottom, and fit only for flat-bottomed boats used by farmers for the conveyance of grain. The Lan-ho, which rises in Mongolia, and at whose cradle we have been, is like the Wei-ho: flowing southward not far from Ze-hol, and passing Yoong-ping-foo, it spreads out lazily on its sandy bed, and slowly winds onwards towards the Gulf of Pe-chi-li; it is quite unsuitable for boats. The Leao-ho in Manchuria is not of any use for large boats above Newchwang, though small boats can get up near to Mqukden, a distance of about 500 *li* or 130 miles by water.

THE IMPERIAL HIGHWAYS.—The northern provinces are well provided with good roads; they were made by early Emperors and have been kept in good or bad repair according to the vigour or non-vigour of the Government. They radiate from the capital in all directions, one goes eastward through Yoong-ping-foo, Shan-hai-kwan, King-chow-foo, Moukden, Kirin, Ning-gu-ta, and on to the very extremity of the continent, having a good

cart-road to Poissiet, the Russian port on the east coast of Asia. Near Moukden this road branches off to the capital of Corea. Another great road goes north-east through Ku-pi-kow, on to Ze-hol, and thence to Parin-hotun and Poro-hotun, about lat. 45 deg., and I know not how much further northwards. A third goes westward through the Nan-kow pass, Siuen-hwa-foo, and Kal-gan or Chang-kia-kow, where it bifurcates; one branch going north by west to Dolonor, and the other going on to Urga, and Europe. A fourth goes south-west through Pau-ting-foo, Ching-ting-foo, to Tai-yuen-foo, thence south through Shan-si to Toong-kwan, the fortress at the southerly bend of the Yellow River. From this place it goes west past Si-ngan-foo, beyond which city it divides into two branches, one going west by north to Kan-suh and Thibet, and the other through Sz-chuen on to Siam. Another road runs nearly due south through Pau-ting-foo, Ho-kien-foo, Tuh-chow, Tung-chang-foo, Sien-chow, Huchin, lat. 33 deg. 10 min., long. 117 deg. 16 min. E., where it divides, one branch going to Nan-king and the other to Nan-chang-foo, where passengers embark for Canton. A sixth leaves the road to Shan-si at Ching-ting-foo, proceeds southwards *via* We-kyun-foo to Kai-foong-foo thence to the great distributing city of Fan-chung on the Han River, where travellers can hire boats which will take them by water all the way to Canton: this is the western Canton route. And there is yet another great road which leaves the southerly road at Tuh-chow, also spelt Ti-chow, and leads south-east through Shan-tung, giving off a branch which leads to Chefoo, now a good cart-road. These roads are carried in as direct a line as possible to their respective destinations. They are supplied with excellent bridges, some of them really magnificent, having twenty, thirty, and forty arches, as the case may be. Towards the west of Pekin and in Shan-si they are often of marble, and the balustrades finely ornamented by innumerable figures of animals, such as lions, tigers, dogs, monkeys, &c., &c. When the rivers are very wide the roads are well supplied with ferries, where huge boats are to be found capable of taking three or four carts at one time. In the province of Chi-li and parts of Ho-nan and Shan-tung the highways are perfectly level, and you can travel at the rate of 35 to 40 miles *per diem*. In Shan-si and the hilly districts progress is slower. Valleys and ravines are generally chosen when these do not diverge too far from the direct line; but where necessary roads are cut through

rocks, miles of the way are causewayed with huge blocks of granite, and the road carried manfully right over huge ranges of mountains. In the Shan-si passes and several other places the labour expended is something stupendous, quite in keeping with the other huge undertakings in this Empire, such as the Grand Canal and the Great Wall. These roads are usually from 70 to 80 feet broad in the plains, and are generally planted on each side with rows of fine trees, so that they look like some of the fine roads in England and on the continent, and in some places like grand avenues. Every few *li* there are guard-houses where soldiers used to be stationed, who were ready to accompany travellers during night to protect them from danger, and every 10 *li* or $3\frac{1}{2}$ miles there are huge well-built signal towers on which fires were lit at night, and dense columns of smoke from wolf dung raised in the day time when any intelligence of importance had to be telegraphed. In addition to the numerous and well-supplied inns for travellers, there are also large inns for the Emperor or important officials, and places where post-horses are kept always in readiness, and where couriers can obtain fresh steeds to post along on their errands. In addition to the large cities which appear on the maps, there are large villages every 10 *li* or $3\frac{1}{2}$ miles on the great highways; some of them very important and the centres of much trade. Few things impress the traveller more with the large-mindedness, ability, vigilance, and vigour of the former Emperors and the greatness of the Empire than these roads; and we do not wonder at the touches of exaggeration which mark the pages of Marco Polo, and the Jesuit fathers: for the bridges, cuttings, and the fine cities then in their glory would form a powerful contrast to the roads and works which existed in their native countries. And perhaps nothing so painfully demonstrates the decadence and utter emasculation of the present rulers than the wretched condition of many portions of these fine roads, which could be repaired by the expenditure of a little thought and a very little money.

CART ROADS.—But besides these highways, there are innumerable other roads intersecting the country in all directions, and forming a perfect net work, and these not simply foot-paths, but good roads traversed by hundreds of vehicles every day; so that wherever you wish to go you can have almost always a cart-road direct to the place. Many of these minor roads are also supplied with signal towers, inns, and every convenience for travelling.

PROPOSED RAILWAYS.—The country is admirably adapted for railways. The greater part is a plain, and when mountains branch inwards there are generally valleys, often very wide and fertile, through which lines could be carried. The great highways I have just been describing form the best guides both physically and economically, in reference to the most feasible lines. They form the most direct routes to the great emporiums of trade with the fewest possible natural obstructions. Their course lies also through the most populous districts, either so originally, or attracted by the facility of communication, so that lines of railways could be laid parallel to them all. But as such a net work of railways is out of the question at present, I would venture to suggest two great trunk lines, one running from Peking south to Canton, with a branch to Shanghai; and another running east and west from some harbour north of the Yangtsze-kiang, available for ships of large tonnage, and open all the year round; and from this carried through Shan-tung, Chi-li, Shan-si, and on to Shen-si with a view, ultimately, of being carried through central Asia to Europe—an undertaking not much more formidable than the great Pacific line in America now in process of completion. It would be well to begin with the first for many reasons, but more especially because in this case advantage could be taken of the banks of the Grand Canal for a portion of the way, and as this lies nearly direct through a country perfectly level, and is Government property, there would be no bargaining with private individuals, no grave-yards to upset, and, in short, the least violent change possible under the circumstances. I have no fear of the junk men who still remain on the canal rising against such an undertaking. Comparatively few now, they would soon find employment in the construction of the works needed for this enterprise, and they are not strangers to the kind of labour which would be required. And in reference to this and the muleteers and carriers of all descriptions, I am confident that the lateral traffic which would immediately spring up in connection with such lines would soon engage all their resources, and create a business which would astonish us. And I base my belief upon personal observation of the spirit of the people, confirmed by what has transpired in reference to steamers. These have been rapidly taken advantage of not only by the mercantile classes, but even by the literati, who are so difficult to move: witness the loads of scholars which are brought

from the south to Tien-tsin for the examinations in Peking; also the numbers of mandarins, who now use them. The fame of steam-ships has spread all over the country; their safety and rapidity is in every man's mouth, so that railways would soon also command their approbation. I see therefore no great difficulty in the introduction of railways into China. The graveyard question has been exaggerated; they are formidable only near large towns, and could easily be avoided; or where unavoidable a little extra money or an Imperial tablet would soon allay the clamour. No one who has thought carefully over the subject ever contemplates the multiplication of Treaty ports and Consulates in China. The impracticability of this has been clearly shown in an able article in the *Consular Gazette* dated July 15th, and yet every one sees the importance of this vast country with great resources all but untouched being thoroughly opened up. How, then, can the problem be solved? By the introduction of railways and the adoption of a system of passports; this would secure all that was necessary for the development of the country, obviate the necessity of the creation of minor agencies by large firms, and entail little or no expense on the part of foreign Governments. They would of course require to be managed at first and for long by foreigners, but this might be done by the creation of another service, such as the Imperial Customs, and so in no way oppose, but rather be subservient and a source of strength to the native Government. I sympathize with the published opinions of H. E. Sir Rutherford Alcock, H. M.'s Minister, that the Treaty should be revised impartially, that we should hear what the Chinese have to say as well as our own countrymen, but I humbly think we ought never to lose sight of the speciality of the case as regards the Chinese. They are in a state of transition, or rather differentiation; new thoughts and new ideas, and new means of warfare have got abroad among them, fermenting and exciting their minds. Year by year this is increasing, and it is as impossible to arrest its course as it is undesirable. The old paths will not now do; China can never again be governed in the old way. The country is far too large. Foreign ideas have made far too great progress for this. New channels must be provided for the new thought. New means must be adopted to meet the emergency which has arisen, else it will be confusion worse confounded. China is like a man under a course of medicine, we have

put him in this position, we dare not leave him alone far less trust him to his own ideas, for that would prove his ruin. We must take him in hand, point out the proper methods; and, as far as consistent, force him to follow them, until we have set him on his feet again in new health and fresh vigour, qualified to start on a new and glorious career. I do not despair of the Chinese being able to rise again from their prostration, nor even of the present Government being able to purify and re-organize the country; but new means must be adopted. In the present position of China nothing is so likely to do her real and permanent good as the introduction of railways. It would equalize the administration of justice—modify the evils of famine, enrich her people; it would provide means for the diffusion of knowledge, break down her hoary prejudices, and bring her within the pale of civilization. Moreover, it appears indispensable to the Government of the country. Four organized bodies of rebels at present devastate the Empire—one in Yun-nan, another in Shen-si, a third in Ho-nan—and a fourth in Shan-tung. They are destroying everything wherever they go. Unless there be some means provided of rapidly concentrating troops at any given point, I do not see how they can be put down, or peace and security introduced into this unhappy country. Railways or anarchy appears to me the only alternative now left to the Chinese people.

SHAN-TUNG CITIES.—*Tsi-nan-foo*, lat. 36 deg. 50 min., long. 117 deg. This city, the capital of Shan-tung, lies in a sort of basin, the ground on all sides being higher than the city. It is a much more important place than I expected to find it. There are several long streets full of large shops and life and bustle. The chief one is that which runs east and west, and including the western suburbs is 8 *li* in length. Several of the streets which run north and south are also crowded with excellent well-stocked shops. I saw quantities of Russian cloth, as well as a proportion of Bradford, Leeds, and Manchester goods. There were not a few book-shops, full of books and native drawings and paintings, indicating the presence of literary pursuits and tastes. We met two immense funerals, and saw several processions during the two days we were there quite equal to those I have seen in the south, indicating riches and profuse expenditure. There were several fine temples in the city, and two spacious examination halls, one for Bachelors of Arts and the other for Doctors of Law. There is also a Drum Tower, and all the furniture of a provincial

capital. There is one most interesting feature in connection with this city, I refer to the three springs which bubble up in three separate gushes of water about 2 feet high outside the western gate, and which fill the moat all round the city, and form a fine lake inside on the north. These springs are now enclosed by a high wall, and in front of them and around them are temples and gardens; the water is good tasted, somewhat tepid, but greatly prized by the natives. The lake has several summer-houses in it, and must be very pretty in summer; we hired a boat among the many which ply on it for hire, and sailed over and visited the famous places; we rather enjoyed our sail, though the morning air was raw. Fish of many kinds literally abound, and form no small proportion of the food of the people. There are about two thousand Mahomedan families and two mosques. Our butcher was of that persuasion; we found him a very decent man, and he gave us many details in reference to them. These people all turn to us, and claim kindred as worshipping the same God. There are fine hills on the south of the city, on which are some famous temples, much frequented in summer. Owing to these and the low-lying position of the city, the houses are very damp (except on the western suburbs, where the ground is higher), and fever and ague is common. You have only to scrape a hole a few inches deep, and you find water. This city is within 4 miles of the New Yellow River, and would form an important market were this river opened to steamers.

Tsing-chow-foo, lat. 36 deg. 45 min., long. 118 deg. 35 min., approaching *Tsing-chow-foo*, the old capital of the Province, we found the country fine, roads paved, and every thing indicating former grandeur. We passed through the Tartar city which lies on the north of the city proper, and passing over a plain entered the suburbs and city. The walls of the Tartar city are high and strong, but the people are not very numerous, and no business is done save in huckster shops. The city of *Tsing-chow-foo* lies in a hollow like *Tsi-nan-foo*, and has fine hills behind it; it is very large and has a great population. The shops have decreased in splendour, and are now almost all second rate, but it continues to be the centre of a great local trade.

Kyau-chow, lat. 36 deg. 16 min., long. 120 deg. 10 min. This city was in former times the most important centre of trade in the east of Shan-tung. It received its supplies from the south by the sea, and distributed goods all over the country. Now,

owing to the rising of the coast or the filling up of the bay—for it is difficult to determine which—and especially to the opening of the port of *Chefoo*, business has greatly fallen off. What is now the port of *Kyau-chow* is a small town called *Ta-poh-tur*, five miles from the city, situated about thirteen miles by water from the sea, on a creek which is as nearly as possible quite dry, when the tide is out. The Ningpo and Fokkien junks anchor in the roadstead and the cargo is brought up in flat-bottomed lighters, fifty or sixty of which we saw lying high and dry on the banks waiting the flow of the tide. The country all round as far as the eye can see is a dead flat; seawards it was quite marshy, and though we were only six miles from the shore as the crow flies we could not discern it; all we could see was two or three small islands a considerable distance away. The Chinese Government wished it to be made the port of Shan-tung rather than *Chefoo*, but this would have been fatal, as the bay cannot be deep,—is either filling up with the monsoon or rising of itself, and appears exposed to the wind from almost all directions. The city of *Kyau-chow* bears unmistakeable evidence of its former wealth and importance. The streets in all directions are bridged over every few yards with *Pai-lows* of endless device; some are made of granite; some of sandstone. The cross-beam is one piece of stone reaching from one side of the street to the other; and the upright pillars, also of one piece, rest on immense blocks, giving a richness to the city which is striking. These abound also in the suburbs, as well as in the city proper. The site and structure of the private houses also speak of the richness of the place; many of these cover a large space of ground, having walls often thirty feet high, if not more, carefully and strongly built. Many houses had high poles before their front-door, indicating that some member of the family had been a mandarin. The city itself is not large, but the suburbs which are walled round are extensive. The trade is carried on chiefly in the western suburbs. The people appeared rather hostile to foreigners; they called us all sorts of names; one man partially drunk was exceedingly abusive. *Quod est in corde sobrii, est in ore ebrii.*

Tung-chang-foo, lat. 36 deg. 38 min., long. 116 deg. 11 min. This is a very important city situated in an excellent position. It lies near the new course of the Yellow River, and on the banks of the Grand Canal. The eastern suburbs are very extensive and have warehouses rivalling many in Tien-tsin and Shanghai. It

might be made the terminus of a line of inland steamers, as there is no doubt of the navigation up to that point.

The other *foo* cities, such as Yen-chow-foo, Yi-chow-foo, Lai-chow-foo, Tung-chow-foo, and Tai-ngan-foo are quiet departmental cities, important only as centres of rural trade. Besides the cities above mentioned are several *hien* cities and towns worthy of notice as the centres of considerable distributing trade. The chief among these are Wei-hien and Whang-hien, Chu-ching, and the great town of Tsu-chwen, near Chi-chow, and Tei-chow and Lin-sing, near the western borders of the province.

But I shall not attempt to describe any more cities, but only say in general that excepting in Shen-si and Honan and some places in Shan-tung where scores of cities and hundreds of villages have been burned down by the rebels within these two years, and are still lying in ruins all over the district, the country appears prosperous and the people well fed and well clad. This is eminently the case in the northern half of Shan-si. There the cities are more numerous, and the cities themselves more populous than anywhere else, many of the "hien" or 3rd rate cities being more crowded than a "foo" or 1st class city of other provinces. The villages of Shan-si, too, are very numerous, generally surrounded with high mud-walls, full of goods of all descriptions, and the people giving not a few indications of wealth and prosperity. I have found foreign goods of several kinds in every province in all their busy cities and markets, such as Manchester cottons, Russian woollen goods, matches, needles, &c., &c. I was surprised to find everywhere such quantities of Russian cloth; they evidently carry on a most extensive trade through Mongolia. We met Russian-speaking Chinamen in several cities, rather an ominous circumstance.

Recurring to Shan-si, I may mention that the architecture of this province presents two notable features. In the mountain districts we found whole villages living in houses scooped out of the sides of the sandy hills—veritable troglodytes—and this not from poverty, for the front of their caverns were faced often with hewn stone and had finely-arched doors and windows. The people evidently preferred it, for they had plenty of stone and plenty of money to build houses in the usual style if they had wished. Some of these villages were extremely picturesque; there were sometimes three, four, five, and six stories rising one above another at the front of a hill. The occupants often went up to them

by ladders. Here the peculiarity of Edinburgh was seen in its rudimentary state. In the plains the houses had flat roofs on which the people winnowed and thrashed their corn and the women sat at their various employments. Large houses had often square towers, giving them the appearance of old English churches. The people of the province appeared much more superstitious than anywhere I have been. Every city and every village and even every cluster of houses had a tower—sometimes a very tasteful one—erected generally at the south-east angle, as a protection against evil influences; and, worse than this, we found trees in many parts covered with votive offerings, and before which stood altars and pots of incense, indicating that they were worshipped; and, in fact, we were left in no doubt on this head, for on many of them we found inscriptions in large letters—"If you pray you will certainly be heard." Better living trees than wooden blocks! we thought, though both are bad.

We never were at any loss for food or necessaries on all our journeys through these provinces; nor have we ever had the least molestation from the people. They have evinced great curiosity to see us, which has often taken disagreeable forms, depriving us of rest and comfort, and on my last journey they actually took out one of the windows to see us, because I had closed the shutters, but nothing further, and even in the midst of the greatest excitement to get a view of the foreign devils, as they called us, an appeal to their sense of good breeding or a pleasant word would allay a hub-bub, and permit us to go on with our work in peace. This has convinced us that the opposition to foreigners so much talked of must have existed with the officials, and not with the people, for it seems impossible that virulent feeling against us could have died out so soon.

Another most important matter should be mentioned. We have found our passports omnipotent all over this country. Whenever we were in any trouble with our carters or required assistance of any kind, the presentation of our passports at the office of the mandarin invariably procured the help we needed.

As a rule, the people in the northern provinces are larger and stronger men than south of the Yang-tze-kiang, but they are much less refined. There are fewer scholars, and these not so far advanced in their literature as their brethren in the south; still there is a large proportion devoted to letters, and the great mass of the people understand a sufficient number of characters to be able to read, especially books in the mandarin colloquial.

All over these provinces they speak the same dialect with very insignificant differences, and not only so, but this *patois* prevails throughout Kan-su and Sze-chuen—in fact, over two-thirds of China—a most important fact for those who seek to introduce new truths and a new literature among this most interesting people.

I need hardly say that ignorance and superstition prevail everywhere and among all classes; and if there be less of the latter among the better educated, a species of atheism takes its place, which is equally detrimental to the moral character. As a consequence, the objects supremely sought by them are the gratification of the lower appetites of their nature, and as money secures that and whatever else they desire, it is grasped after by every one with all the eagerness of men who have nothing better to look for, and the deceit of those who have no high principles to regulate them in their pursuit of wealth. Immorality abounds and opium smoking is spreading like some terrible virus through all branches of the people and laying thousands of strong men low.

The Shan-tung men and the Shan-si men are famed as the most enterprising in the north of China. The Shan-si men have penetrated Mongolia, carrying with them a measure of civilization. Numerous families from Shan-tung have colonised Manchuria, and are rapidly assimilating that country in every respect to China. But not only are they inclined to migrate, many are also ready to adopt any measures which will afford scope for their industry and ingenuity. Several have expressed a strong desire to begin mining operations in places at present untouched; one has applied for foreign cotton seed, another has purchased a spinning machine for the manufacture of cotton yarn, and so on. But, alas! for their enterprize. An incubus rests upon them paralyzing every effort. When a man attempts to step out of the ordinary routine, an ill-disposed neighbour or a petty bailiff comes in and threatens to inform against him unless he gives him so much money. Suppose this rascal's demands are met, the mandarin next appears with his exactions, and the man is generally ruined.

"Little fleas have big fleas, upon their backs to bite'em

"These fleas have other fleas, and so on *ad infinitum*."

These lines of Swift's, thus altered, set the matter vividly enough before our eyes; but they are too ludicrous for the gravity of the subject. It is miserable to see such a people as this ground down

into fixed automata by such a system, and most lamentable of all to find it pervading all classes and all departments of state up to the very highest position.

And this extends to religious matters as well as secular. If a man adopt Christianity he is often set upon by petty officials, and it is this which renders it so indispensable that our treaties should not only guarantee the missionary protection in his labours, but that the converts be defended from obvious and illegal oppression.



ARTICLE IV.

NOTES ON THE PRODUCTIONS, CHIEFLY MINERAL
OF SHAN-TUNG.

BY THE REV. A. WILLIAMSON.

UNTIL recently very little was known of the minerals in Shan-tung. Vague impressions regarding the existence of coal at Po-shan-hien and Wei-hien constituted about the sum of our knowledge, but now we can speak with some degree of precision. Various places have been visited, and samples of coal, iron-ore, galena, &c., &c., have been brought to Chefoo, and pronounced excellent.

COAL.—There are three great coal-producing districts in this province in active operation; several minor ones, and other places where coal is known to exist, but where mining is interdicted. The chief among the great producing districts is the valley of the Lau-fu-ho, long. 117 deg. 56 min. E., beginning about lat. 36 deg. 50 min. N., and extending south to lat. 36 deg. 30 min., including the cities Chi-chuen. Yen-shih-ching, and Po-shan-hien. This valley runs north and south, and the hills on both sides are perforated with coal pits. Several varieties are produced; some fine bituminous coal, some partly bituminous and partly anthracite, and other kinds difficult to class. This district is famous all over the country, and supplies all the neighbouring towns and cities. Approaching this place, I met a very unexpected product on wheelbarrows, often bound for distant places. I refer to coke; and on reaching Po-shan-hien, found it manufactured in immense quantities. I saw three different kinds of coke; found it stored in large yards, just like those at railway stations at home, and exported in large quantities. They use it for smelting silver and for purposes where great heat is required. This speaks volumes for the quality of the coal.

The second district next in importance lies a little to the south of Yi-chow-foo, lat. 35 deg. 15 min. N., long. 118 deg. 24 min. E. The country here is a plain and the coal is obtained by sinking

pits of greater or lesser depth. I found three kinds, viz., bituminous, a species of lignite, and another very inferior quality. The people assured me of its abundance; they said that they found it wherever they chose to sink a pit. Here also I found them manufacturing coke, although what I saw was much inferior to the coke at Po-shan-hien. The proximity of the river Yi-ho adds to the importance of this district. It flows past the field, and, by means of flat-bottomed boats, coals could be conveyed to Tsing-kiang-pu on the Grand Canal, thence to Chin-keang and on to Shanghai.

The third district lies twenty $\frac{1}{2}$ or so to the south of Wei-hien, lat. 36 deg. 40 min., long. 119 deg. 12 min. The coal here is plentiful, and is of excellent quality. It is not very far from the river Wei-ho, nor from the seaport, and, could very easily, be brought in junks to Chefoo. The places of minor importance are Sin-tai lat. 36 deg. 7 min. N., long. 117 deg. 56 min. E.; Lai-woo, lat. 36 deg. 24 min., long. 117 deg. 44 min.; and Chang-kiu, lat. 36 deg. 57 min. N., long. 117 deg. 31 min. E. I met coal from all three places, that from Sin-tai and Lai-woo was capital, but the Chang-kiu coal inferior. At the latter place we were told there were two seams. One near the surface and the other some feet further down. The coal is mined at all these places in the usual Chinese fashion. A pit is dug down, or a hole is made, at a more or less acute angle in the side of a hill, and the miners work on until water rises; they then leave that place and open another pit. Thus they in all probability miss the finest quality. Judging from the huge lumps which we often saw, it is evident that the coal strata are of considerable thickness. Besides these places where the coal is actually worked, it is reported to exist in several others, such as outside the east gate of the city of Kyau-chow, long. 120 deg. 9 min., lat. 36 deg. 17 min., in the neighbourhood of Kwan-sae, lat. 35 deg. 45 min., long 119 deg. 20 min., at Law-sze-shan, long. 121 deg. 10 min., lat. 37 deg. 30 min., and at Tung-chow-foo. Though we have thus gained something like a definite idea of the quality and quantities of the coal at present produced, yet it has only been to give us a still more indefinite idea of the actual extent and value of the coal fields in the province; for, judging from the direction of the prevailing mountain, ranges, S., S.S.W. to N., and N.N.E. and their geological features, there is reason to believe that it exists throughout the whole of the centre and east of Shan-tung.

There is one thing in this connection, which has been brought to light by the missionaries at Tung-chow-foo, which is creating considerable interest and likely to have an important issue. I refer to the fact that an interdicted coal mine has been found within two miles of the city and close on the sea-shore. The existence of the mines first reported by the natives and afterwards denied by them, has been set at rest by the discovery of a tablet half buried in the ground, where the pit was, forbidding the further working of the mine. The writer has a copy of the inscription in his possession. It is dated 11th year of the Emperor Kia-king, 6th moon, 11th day, which makes it A.D. 1806. It is issued by the Chi-hien mandarin, and declares that as the pit disturbs the Fung-shui of the villages burial-grounds, and neighbourhood, it is henceforth closed, &c. Afterwards an application was made to re-open it, when the *literati* took the matter in hand, and insisted on its continuing shut, and succeeded in their efforts. Seeing that this city is an open treaty port, that it is far removed from the capital, that the pit is in a comparatively quiet place lying in contiguity with magnetic iron-ore, galena, and silver-ore and that it is within 30 miles, by sea, of Chefoo, no doubt attempts will be made to work it. Should it prove as productive of good coal as is anticipated, it will be a great matter to all—natives and foreigners—and a boon to the steamers on the coast and the men-of-war which coal here.

IRON.—This most important metal has been found in several places far removed from one another, and in such positions as to indicate its wide distribution. Very fine iron-ore, viz., the black oxide of iron, has been procured at a hill called Pau-shan, about 50 *li* south of Tung-chow. It lies near the surface, and there appears to be plenty of it. It is nearly pure metal and strongly magnetic, and draws a needle after it like the strongest loadstone, which it really is. When in the city of Tsi-nan-foo, the capital of the province, I saw a man sitting at the side of the main street selling pieces of this kind of ore as wonderful stones, which, on being struck, "grew a beard and drew iron after them." Inquiring where they came from, he informed me that they were from the city of Ha-ta, in Manchuria, the most distant and wildest place his imagination could think of. I felt persuaded they were from the neighbourhood, and found out afterwards that the hills behind the city contained the ore. Having examined the pieces he had, I feel persuaded that the ore was of the same na-

ture and geological formation as that near Tung-chow,—two hundred miles apart,—and this ore is the most valuable of all iron-ores. Since then these hills have been visited by a geologist and found to contain vast masses of this ore cropping up to the surface. Iron-ore of a somewhat different description has also been procured from the hill called King-kwo-shan, to which we shall have immediately to refer, as producing galena and silver-ore. This hill is about 50 *li* to the south by east of Tung-chow. And yet a third description, very much like specular iron-ore, has been found in the neighbourhood of Chefoo. Iron is also reported to exist in the hills behind Foo-shan-hien, within ten miles of the port, but this has not yet been verified.

GOLD.—When I first began to make inquiries regarding the minerals here, I was astonished at the universality of the knowledge of the existence of gold and the apathy regarding it. Every one seemed to know of it. A native literary friend said that “it was found in the sand of almost all the streams in the eastern portion of the province after heavy rain.” Another well-educated man acquainted with the district reported the fact in nearly the same words, and the other day a man, a scholar from Hai-yang said that it was found in the rivulets in his neighbourhood. But while it thus appears to be very widely distributed, there are several places which stand out pre-eminent. The first is Kieu-dien, 70 *li* S.E. from Lai-chow, lat. 37 deg. 12 min. N., long. 120 deg. E. and 95 *li* N.E. of Ping-tu. Marvellous stories relating to the richness of the quartz, and the sand are current among the people, which of course have to be taken *cum grano salis*. I was told that a tea-cup full of the quartz, ground down, would sometimes yield two oz. of gold, and that 100 catties of the sand was worth about 1,000 cash; I was also informed that many years ago a man came from Shen-si with 300 followers, and in two months cleared 50,000 oz. after paying all expenses and so on. Two or three years ago, a company of respectable men belonging to the neighbourhood made a proposal to the Chi-hien mandarin to work the mine, but he demanded 10,000 taels in hand before he would allow them to commence operations. They offered 3,000 taels, but did not venture a larger sum—more especially as they could not tell how much more might be demanded after they had commenced. The mandarin remained inexorable, and so the project was given up. I mention this to shew why so few care to engage in the mining of the precious metals. The *jus metal-*

lorum lies with the Emperor and Government, and they have no scruples in the matter of squeezing. The mandarins also say that they are afraid of disturbances among the workers of such mines.

Another place, famed as a market for gold-dust is Ku-hien, about 18 miles W. by S. from Chefoo. It is procured in the streams which flow from the Lau-sze-shan. I have passed several old gold-washings on the banks of the river which flows past the town.

A third place is Kow-tew near Ning-hai, 60 *li* S.E. of Chefoo. In my last journey having passed through a district 100 *li* to the S. W. of Chu-ching, long. 119 deg. 45 min. E., lat. 36 deg. 1 min. N., apparently full of minerals, and having arrived at the village of Kwun-sae and finished my work, I enquired of the inn-keeper—as my custom was—about the products of the district. He told me of a wonderful hill about 10 *li* south of where we were, which he affirmed was full of metals. It was called the hill of the “Seven precious things,” and yielded gold, silver, copper, lead, tin, iron, and coal. He further said that it had been mined up to the close of the Ming dynasty, but was now forbidden. Deeming his story to be too good to be true, I sent out my assistant to enquire quietly about it, and he returned affirming that the matter was well known, and that two or three persons independently confirmed the inn-keeper’s report. Though no one cares to engage in the regular operations of mining for the reasons already stated, yet any one is at perfect liberty to search the streams. Accordingly, every year a good many of the natives engage in this employment. They often find nuggets of varying size, which is a great temptation to persevere, in spite of failure. And yet last year I have been told that the gold-washers made on an average about one dollar per day in the district of Tsi-hya.

GALENA.—Lead-ore, containing lead and silver in varying proportions, appears to be very widely distributed over the eastern portion of the province. We hear of its existence in all quarters. We are assured there is an interdicted mine in the hills close behind Chefoo. We hear of it south towards Hai-yan, and west towards Wei-hien. A mule-load of the ore has been brought from King-kwo-shan, 13 miles E. by S. of Tung-chow, already referred to, and two mule-loads have been got from another place near Ning-hai. Both specimens were most excellent, containing about 80 per cent. of lead; that from King-kwo-shan was parti-

cularly valuable, and contained a percentage of silver. In reference to this latter place, I am told on good authority that while on the south side of the hill lead prevails, on the north, silver predominates, especially in one spot. In fact, I was told that one catty of the ore sometimes yielded 8 ozs. of silver, but I do not vouch for this. Again, about 2 or 3 miles south of the city of Tung-chow-foo a tablet has been discovered relating to a lead mine in that locality. It announces that the mine has been closed owing to the representations of the elders of the surrounding villages, who affirm that the opening of the mine disturbs the Fung-shui of the neighbourhood,—the old story,—which shall hold its spell over the people till the truth enlighten them, and the roar of the railway engine shall dissipate it for ever.

COPPER.—Specimens of copper-ore have been brought from the neighbourhood of Chang-kia-chwang, 110 $\frac{1}{2}$ SW. of Chefoo, and there is every reason to believe that it abounds there and elsewhere in this part of the promontory.

PRECIOUS STONES.—Travelling round the promontory two years ago, I found large numbers of pebbles among the people. Some very fine ones, bearing a strong resemblance to the cairngorms and stones got on the west coast of Scotland. There were several varieties in structure, shade and colour, and many of them were such as would take on a beautiful polish. The place where they were procured in most abundance was to the east of Yung-ching, on the sea coast, at the extreme end of the promontory. But the most famous place for precious stones is a hill about 100 $\frac{1}{2}$ south of the city of Tsi-mi, long. 120 deg. 32 min., lat. 36 deg. 22 min. This mountain forms one of the Ngan-shan range, is crowned with temples, and belongs to a fraternity of priests, who every year obtain a very large income from their sale. The stones are of various kinds, the prevailing kind being rock crystals of various shades, of which they make spectacles. There are others of different species, which are used for ornaments of various descriptions. Since my return I saw a large purple-coloured stone from this hill exposed for sale in a native hong. It had many features of a true amethyst, though one or two things appeared to indicate otherwise. It was as large as a boy's head, and weighed 12 lbs., and, if genuine, would be worth I know not how much.

MARBLE AND GRANITE.—Of these we have many varieties, but as they are of less importance, I need not trouble you with an account of them here.

ASBESTOS.—This strange fossil mineral is found at King-kwo-shan, and also at Law-sze-shan, both of which places have been formerly noticed as producing other minerals. The natives use it for making Fire-stoves, crucibles, and other fire-proof purposes. The fibre is good and very feathery, and by the admixture of cotton or hemp could be woven into articles of clothing. Such articles being exposed to fire and having all the alloy consumed, would afterwards form fire-proof garments, such as ancient history speaks of, and such as are used in Legerdemain. But the mineral would make most excellent fire-brick, which would be cheaper and more durable than any others. This is worthy of the consideration of the masters of the steamers on the coast.

SULPHUR.—Sulphur is procured in several parts of the province. I found the natives making copperas (sulphate of iron) at different places in the valley of Law-foo-ho.

SULPHUR BATHS.—Speaking of sulphur reminds me of the hot sulphur baths which are found throughout the district, and which deserve mention as an increasing resort for foreign invalids. The baths in greatest favour with the Chefoo community are those at Ngai-shan, about a day's ride from the port, a little to the N. W. of Tsi-hya. But besides these there are others at Loong-chwen, 60 *li*, east of Ning-hai, at Wun-shih-tun, 70 *li*, south of Tung-chow, also near Yi-chow, and at Chau-yuen, 60 *li*, west of Hwang. At all these places there are regular bathing establishments, a square tank with a pavilion over it for the public, which is generally crowded from dawn to dusk by Chinamen, and a private bath for mandarins and wealthy persons. The sulphurous water from these springs varies in temperature. The baths at Chau-yuen are the most remarkable; there, at one place, the water rises almost boiling hot and you can cook an egg on the spot.

SALTPETRE.—This salt is found in several places. It is produced in considerable quantities in the neighbourhood of Kin-chi, lat. 36 deg. 16 min., long. 119 deg. 34 min., and I found it extremely good at Po-shan-hien.

GLASS.—There is another article of manufacture at Po-shan-hien which is little known to foreigners, but which proves a most important article of internal commerce. Long ago the natives discovered that the rocks in the neighbourhood, pulverized and smelted with the nitrate of potassa, formed glass; and for many years they have given themselves to the manufacture of this

article, I found them making excellent window-glass, blowing bottles of all sizes, moulding cups of all descriptions, and making lanterns, beads and ornaments of endless varieties. They also run it into long rods—about 30 inches—which they tie up in bundles and export to all parts of the country. The rods of pig-glass cost 100 cash per catty at the manufactory. The glass is extremely pure, they colour it most beautifully, and they have attained considerable dexterity in manipulation. Many of the articles were finely finished. To pass to other matters on which it seems necessary to say a little:—

COTTON.—This important staple is grown in great quantities in the western and south-west portions of the province; and could be raised in much greater quantities if necessary. There are two kinds; viz., that commonly exported, which is familiar enough, and another superior kind, which is very strong in the fibre, and of which they make cash-bags, saddle-bags, and strong cloth.

SILK.—There appears to be considerable misapprehension in reference to the silk produced in Shan-tung. Many imagine that there are no mulberry trees, and that all silk which can be obtained must come from the worms which can live on the oakshrub and such trees. Here they err. Mulberry trees are very common in the plains throughout the province. During my last journey I found them in all directions out of the reach of the north wind, and passed through large orchards of them. The truth is there are three kinds of silk worms and three kinds of silk in common use among the people, viz., the brown common silk, of which they make the well-known pongee; the second, a beautiful white silk; and, again, a still more beautiful yellow silk; the third, a blackish silk, made from worms which feed on the pepper, tree. Of these three kinds there are various qualities depending on the feed and care taken in the culture of the worm. One quality of the second description is famous for producing a texture almost impervious to stains. The third kind produces a cloth exempt from the attacks of insect, and greatly prized. I believe that when the matter is looked into Shan-tung silk must rise into an important article in the foreign market.

HEMP, CHINA GRASS, &c.—These fibrous plants are well-known, so I need say nothing save only to call attention to them, and remark that they can be produced in any quantity to meet the demand.

DYES.—We have indigo, madder, a fine purple dye, a yellow dye from the leaves of the why-shoo, the famous green dye, and others of less importance.

I may add that, having travelled through the province in every direction, and visited all their chief cities and almost all places of any importance, save a corner toward the northwest, I have found the people civil, inoffensive, only curious and greedy, with a little spice of the anti-foreign element,—yet, like other Chinamen, morally false and foul. Excepting towards the east, there are cart-roads as good as anywhere else in China, and every facility for travelling. The country is extremely fertile, producing great crops of cereals, from magnificent wheat down to rice, esculents from good potatoes down to the egg plant. All sorts of fruits, such as grapes, apples, pears, pomegranates, persimmons, &c., &c.; also beef, mutton, game, &c., &c. Recent travels and researches have revealed to us immense fields of coal and iron in Shen-si; immense fields of coal in Chi-li; and also great fields of coal and iron in Manchuria. Those taken in connection with these open up a vast subject of speculation and foretel a great future. Here we have every element necessary to progress and dominion; we have coal, the source of steam power, and that which makes every kind of mineral valuable, as it affords a cheap means of smelting them. We have iron for machinery and raw materials of the most important descriptions in profuse abundance; we have excellent stones for building purposes; we have precious metals for currency, and marble, and precious stones, for ornamentations; we have a most fertile and varied soil, grain to nourish, and fruits of all kinds to please the appetite. We have men in some degree educated, with clear heads and strong frames; and we have one colloquial throughout the whole country, which also has the advantage of being a written language. Providence has not placed these elements of power here in vain, so that, sooner or later, we may reasonably anticipate that China shall rise from its decrepitude, and either of itself, or under the guidance of western genius, with more than renewed youth, rule over this part of the world. The north generally (all the world over) dominates over the south, and China will not form an exception to the rule; for here in addition to better brain and muscle and climate, we have the advantage of immense and varied resources in juxta position; and as Shan-tung has the pre-eminence in geographical position, with safe and commodious harbours open

all the year round on the south as well as on the north of the promontory it is not unlikely that this province may be the seat of power in the new order of things which is certain to arise. And yet two things are clearly indispensable to any measure of advancement on the part of the people, and they should go hand in hand; first, the diffusion of knowledge, especially that truth which alone can enlighten, purify, and strengthen, the moral character of a people and, secondly, leaders to initiate them into the arts,—guide them in the path of progress and able to defend those who enter it, from the oppressions of their own countrymen.



ARTICLE V.

ENTOMOLOGY OF SHANGHAI.

BY W. B. PRYER, Esq.

THE position of Shanghai, regarded from an Entomological point of view, appears at first to be a very favourable one. Situated in the temperate zone with however a tropical summer, it might be supposed that insects requiring great heat, as well as those to which a moderate temperature is most suitable, would both be found here, the prevalence of water also would cause one to look for large numbers of insects with water-inhabiting larvæ. These expectations of a rich Entomological country are not very fully realized. On a hot summer's day a fine handsome *Papilio* (*Papilio Pammon*) may frequently be seen dashing through our compounds, and from all the neighbouring trees the call of the *Cicada* is heard only too plainly; a comparatively huge *Dynastes* is occasionally met with, and large grasshoppers are common; but the large sized insects most common here, are *Longicornes*, the larvæ of which, being wood feeders, could hardly be expected in any numbers in such an almost treeless country as this is; the *Mantis* is of frequent occurrence; but, beyond these insects the Entomological inhabitants of the surrounding district are nearly all of a moderate size, and the fauna is very similar to that of England. This is, I imagine, to be traced in great part, to the severity of the winters we have here, cold is the enemy of luxuriousness of growth in the Zoological world generally, and the insects which the hot summer would attract, are not able to stand the winter.

As I have said before, the insects we find most commonly, are nearly all closely allied with those occurring in England; even these are not abundant, and this I attribute to the sameness of the vegetation. We have none of those pretty hedgerows, tree shaded lanes, and frequent woods, which lend such a variety to a country walk, and at the same time afford cover to so many different descriptions of plants; here, a country walk generally

ends in one having to pick one's way like a rope dancer, on a narrow ledge of earth with a wet paddy field on each side. The few miserable substitutes for roads are not bounded on either hand by hedges; and bamboo copses, the nearest approach to woods, are wanting in the fine thick undergrowth of a copse at home, the ground being strewed with dead bamboo leaves and twigs. The graves are certainly objects in the landscape which we cannot boast of in England, and were it not for these, several large sections of insects would be nearly unrepresented here.

The only aquatic insects we have are those that can live in muddy water; the more interesting tribes Trichoptera, Sialides, Ephemera, &c., are as far as my experience goes, never found round Shanghai; I have given up some time to the search, but have only succeeded in taking one small species of Trichoptera. Of the species that can thrive in dirty water we have only too many, the mosquito is a well known example. Libellulidæ swarm, and sometimes appear in almost incredible numbers: I was once witness to a flight of this kind, the air as far as the eye could see was thick with them, and in a walk of about a quarter of a mile on each side from my house, they appeared in undiminished numbers; so that the whole British settlement must have had a tremendous cloud of them passing over it. Amongst foreign residents here they are usually known as storm flies; a good many of them are frequently to be seen flying about in the air over the Bund: their appearance is generally supposed to foretell high winds, but on the occasion of seeing the flight before referred to I noted that nothing unusual in the atmosphere followed.

These insects abounding in such numbers as they always do, must put a great check upon mosquitoes; if by some calamity we were deprived of them for one season, we should be almost devoured by the mosquitoes, as the Libellulidæ during their long larval period of nearly a year, and afterwards as imagoes, must consume an immense number of mosquitoes both in the larva and imago states.

One other reason, besides the want of variety of vegetation, for the scarcity of ordinary insect forms such as Lepidoptera, Coleoptera, Trichoptera and Hemiptera, is found in the prevalence of raptorial insects. One of the most ravenous of these, the Mantis, is so common, that to an Entomological eye batches of its ovæ appear on all sides, plastered to tree trunks or to walls, on dead

leaves, stones, twigs, branches of trees, in fact everywhere. When we consider that the mantis in all its stages is always ranging about the low herbage and brushwood in search of its prey, and that it has an insatiable appetite, the wonder is, that a single Lepidopterous larva escapes it; a full grown mantis will eat any living thing from a fly larva or a mosquito, to a large hawkmoth. The mantis always keeps on the ground or on short shrubs. Next to it, the spider claims our attention as a great insect destroyer. Hunting spiders which use no web but run over the ground, are common; the flat brindled spider frequently to be seen on the ceilings of our rooms, comes under this head; but the most formidable enemy to other insects, is a large and handsome species marked with red, gold, silver, and black. When full grown, it makes a web that catches even the largest beetles in full flight, and will frequently hold an ordinary cap when thrown into it; in many places, it is very common, and destroys a great quantity of insects. Round its web there is usually to be seen a much smaller spider which does not make any web of its own, but picks up the smaller insects that get caught in its patron's. It is amusing to see the quickness with which they run away when they see the rightful owner of the web coming towards them, occasionally however they get caught, and then they are wound up in their capturers silk, and carried off for eating as though they had been ordinary game.

Libellulidæ by day, and bats by night are the greatest foes of air frequenting insects. I was at the Fung-whang hills in June last summer and the Libellulidæ had then nearly cleared off the rest of the insect world; all over the place they had taken up their positions, each one cruising over a space about 10 feet long, and whatever insect appeared in this space was immediately pounced upon; should one of the dragonflies encroach upon its neighbour's domain, a fight ensued directly. There were two or three fine large species that took up regular positions in this way; the smaller ones had to skirmish about all over the place, and get whatever they could; and when I was there, so few other insects were left that the large ones had been obliged to turn their attention to these, their smaller brethren of the same tribe, and seize and prey upon them; this I saw several times. In consequence of the overwhelming numbers of the Libellulidæ this was almost a blank day to me; though only a few weeks before, when there were only a few of them about, the same ground was rich with all sorts and tribes of insects.

The quantity of bats to be seen flitting about on any mild evening here, far exceeds the number of these animals, usually to be seen at any place in England; and as they are entirely insectivorous we may fairly suppose that a much greater destruction of insect life is caused by them than at home.

I think we are to conclude from these observations that it is only those species of insects peculiarly favoured with means of concealment or defence that have much chance of existing. I have paid most attention to the Lepidopterous order of insects, and here I have found this fully borne out; *Papilio* larvæ have a process in their heads which unfolds itself like the horns of a snail, and when developed, has a very powerful scent, a sort of concentrated essence of the leaves of the tree upon which they live; in the case of *P. Pammon* for instance, which feeds upon the citron, a strong smell of lemon comes from the horns. This singular apparatus would certainly drive off any less powerful foe than the Mantis, and might even discomfort that insect, the great enemy of all Lepidopterous larvæ. Many *Bombyx* larvæ are able to sting with great severity; in some cases a blister is raised upon the hand if they are incautiously touched, others make red marks only, but the smart is felt for two or three days. The stinging power is contained in the fine hairs which clothe the body of the caterpillar; they are so fine that the slightest contact is sufficient to make them pierce through the skin, and in all probability they convey poison into the flesh. The cocoons of a great many insects are so admirably contrived to look like a piece of the substance upon which they are fixed, as to defy the closest attempts at discovery; while others though in rather conspicuous places and easily found, are of so hard a texture that they are quite safe from the attacks of any other insects. As an illustration of the latter description of cocoons, I may mention that of a species of *Oiketicus*, which, with a dead leaf wrapped round it, may be seen dangling from nearly all the trees in the settlement, in the winter time.

Up to the present time I have 21 different species of butterflies taken round Shanghai, and 6 in addition at Fung-whang Shan. Several of them are either identical or very closely allied to indigenous British species, and amongst them we can boast of 4 species of *Papilio*, one of which, *P. Machaon* is the only species of this genus to be found in England. One singular fact about this butterfly is, that, contrary to its habits at home, where it is

only to be found in low and fenny districts, it is here usually seen at the extreme tops of hills; the only places I have noticed it being the summits of the Fung-whang and Tung-ting hills.

We have a good many sphinx moths, some of them very common. The Acacia when in bloom attracts a great many; nearly always just after dark, half a dozen fine large sphinxes are to be seen at one time buzzing round its flowers; they are however nearly always confined to 3 species. I have altogether in my collection 23 species of Sphingidæ, and am sure that a great many remain to be taken.

Amongst our Bombyces we can boast of *Saturnia Cynthia*; the *Ailanthus* silkworm, the cultivation of which, as a means of growing silk in England, is attracting so much attention at home just now; we also have *Cynthia Mylitta*, which is domesticated in some parts of China, and produces the Tusseh Silk; both of these are fine looking insects.

The handsome *Actias Luna* is common both in its larva and imago states; the former are to be found in every privet bush, and the latter during the summer may be seen quietly gliding over the ground, or hanging from the tips of the branches in the hedges.

Noctuæ are not at all frequent; one or two species are tolerably common both at sugar and on the wing, but the total number of species is very small; at the present time I have exactly 62 different ones in my cabinet. Two or three species of *Geometræ* are abundant, but beyond these we do not find many: *Tineina* however are pretty common, one or two only too much so as the holes in our woollen clothes laid by for any time can testify. I attribute the scarcity of Noctuæ and *Geometræ* to the ravages of the mantis, which would always be ranging about places frequented by their larvæ; but *Pyrales* owing to the secluded mode of live of their larvæ which keeps them out of the way of predaceous insects, are the most abundant of our moths; the general run of them are larger in size than those common at home, and supply the places occupied by the *Geometræ* which are so abundant in our English woods.

Dynastidæ and different sorts of *Cerambyx* and *Lucanus* with a few *Melolontha* and *Cetonia* make up the bulk of the most noticeable of our beetles; *Staphylinæ* are conspicuous by their almost entire absence, and the ordinary run of small and minute sized beetles so abundant at home are not at all common here.

As might be expected from the nature of the country, Orthoptera are plentiful enough, and some of them are very fine handsome insects: the queer looking long snouted *Gryllus Nascatus* with wings about 6 inches wide, is common in the autumn, and so is a large species of *Gryllus*, the larvæ of which the Chinese keep in small wicker baskets on purpose to hear the continual little chirrup they keep up. The paddy fields in the autumn swarm with grasshoppers of all sorts and sizes. Locusts are occasionally to be caught, but I can hear of no chronicles amongst the Chinese of their appearance in any very great numbers about here.

Hemiptera are not often met with, a few are seen now and then. I have never heard of the occurrence of *C. Lectularius*.* Its absence however is not in any way to be attributed to the cleanliness of the Shanghai lower classes. I have a species of *Nepa* which measures $2\frac{1}{4}$ inches from the head to the end of the body. Sometimes on summer evenings large flights of a small sort of *Notonecta* appear attracted by the light, in such numbers as to completely cover the table in a very short time.

Bees are sometimes domesticated by the Chinese, a square wooden box is made to serve as a hive. The bees are called *Ne foong*, and honey *Ne foong tah*.

* The common Bug.



ARTICLE VI.

NOTES ON A PORTION OF THE OLD BED
OF THE YELLOW RIVER AND THE WATER SUPPLY
OF THE GRAND CANAL.

By NEY ELIAS, F. R. G. S.

THE following is a copy of a portion of the journal kept on a journey from Shanghai to the Yellow River bed.

May 11th, 1867.—Leaving T'sing-kiang-pu, we proceeded over a dry sandy country in a general direction N. by W. to Wang-kia-yin-tszu, a village on the North bank of the Yellow River bed and distant about $2\frac{1}{2}$ to 3 miles from T'sing-kiang. On approaching the bed it has merely the appearance of an insignificant depression in the otherwise flat and level country; and a closer inspection shows that this is actually the case, as its depth is very inconsiderable, even when taking into account the artificial banks which are 8 or 10 feet above the general level of the country. Near the north bank and in the deepest portion of the bed is a small creek partly artificial and containing small quantities of water in places, and upon these small detached pieces of water are a few boats. In summer when the floods come down from the mountains of Shan-tung *via* the Grand Canal, (Chun-ho) &c., this creek is said to flow to the sea for about 10 days each year, having a depth of water, varying from a few inches to about 3 feet; and this is all that is left of the Yellow River.

At Wang-kia-yin-tszu the bed of the River at flood limit was found by sextant measurement to be 551 yards, its greatest depth (by estimation) probably never more than about 15 to 18 feet.

About $1\frac{1}{2}$ miles N. of Wang-kia-yin-tszu the Yeu-ho is reached, a stream there about 30 to 40 yards wide with a slight current towards the sea. This river though not navigable for large vessels all the year round appears to supply the place, to a certain extent of the Yellow River in this district, inasmuch as it is

the principal outlet to the same portion of the sea coast to which the Yellow River formerly led. It is also the high way to the important city of Hai-chow-foo distant 350 *li*. The distance to the sea at its mouth being 220 *li*. The banks of the Yeu-ho at this point (Yeu-ho village) indicate periodical floods; and indeed these are said to take place every summer, and to come by way of the Grand Canal (Chun-ho) and by other creeks from the northward, Shan-tung, &c. Moderate sized junks were seen here, the country everywhere flat and sandy and the dust intolerable.

One mile and a half S. W. of Yeu-ho village is Shi-ha, another small village on the North bank of the Hwang-ho, and from this place a road was followed, leaving S. W. along the bank, to Yang-kia-chong distance (from Shi-há) about 3½ miles.

Here the Grand Canal was cut, at the point where it flows for a short distance in the Yellow River bed and before its waters have reached the highest lock; all the locks being contained in a long deep bend to the southward which the Canal makes between this and T'sing-kiang-pu. The water here flows from the northward, although only some 2 miles or so higher up it has parted with the Yeu-ho.

The current at this time of year however is of course inconsiderable. From Yang-kia-chong we followed the old bed of the Whai, with the Canal flowing on our right hand, for about 1 mile in a southerly direction to a place where the latter takes a sharp bend East and apparently takes possession of a portion of the Whai's old bed; the lower portion of this bed, viz: to the left (E.) of our road being occupied by marshy backwaters, remains of old locks, &c., &c.

It is at Yang-kia-chong that the small creek in the bed of the Yellow River takes its supply from the Grand Canal for the few days in summer as mentioned above. It is said that there were formerly locks here made of earth or mud but that they were removed some few years since as useless. From the appearance of the banks, borne out by information from the people, the rise of water about here in summer would be some 20 feet above its present level, and considerably more than that above its lowest winter level.

From the short easterly bend of Canal, we struck across to the first, or lowest lock, and then up the Canal again to Ti-sze-za, passing 4 locks in the space of about 2 miles. From here a mile in a southerly direction brought us to the old bank of the Hung-

tsze-hu which appeared, with some interruptions to be a continuation of the East bank of the Whai. From this we proceeded N. E. to T'sing-kiang-pu, about 7 miles, passing through a flat grain growing country.

Beyond the bank which is an immense structure, and extends as far as can be seen S. and S. W., is a flat, sandy but cultivated country on a rather higher level than the country outside the bank, and this is the old bed of the Hung-tsze-hu which until 20 or 21 years ago is said to have risen yearly to this limit, and since then only on one occasion, viz: in the summer of 1866.

The "locks" are properly speaking not locks at all, but only large buttresses of earth, faced with masonry and built out in pairs into the canal which there flows at a great velocity and is of a good breadth. These buttresses confine the water (and at the same time deepen it) to about the breadth of a large junk; by means of windlasses fixed above each pair of buttresses, vessels are hauled through them and proceed through eddies and counter-currents under the banks to the next pair of buttresses where they are again hauled through, and so on. By this means vessels are enabled to pass what would otherwise be a rapid. The water however can be shut off or checked, by dropping sluice gates between any two opposite buttresses and this is done, it is said, in the flood season.

All about this part of the country there are roads, fairly broad, though deep in sand and dust and containing large ruts.

The means of locomotion and transport are varied; besides the somewhat precarious water communication large numbers of donkeys, ponies and mules are used both for riding and carrying packs and also for drawing carts. Wheel-barrows are common and also a kind of cumbersome three-wheeled waggon of the rudest construction, drawn by oxen, buffaloes, donkeys, &c., harnessed together promiscuously and generally four abreast, these travel usually in trains.

May 12th, 1867.—Called on the literary Mandarin of T'sing-kiang-pu, Tsing-Hu-ting, a very polite old man, and having explained as well as I was able, through an interpreter, what I wished to see in the district, he was good enough to direct a "writer" to take us to any part of the country around and to give any information about it we might require. After considerable talk with this "writer" the following, relating to the water system was elicited; viz: that the Grand Canal (South of T'sing-

kiang) is supplied from two sources; 1st and continually from the Chun-ho, or (Grand Canal, northern sometimes called Yeu-ho) which flows through the locks, and 2ndly, during the summer months from the Hung-tsze lake and also through the locks; this latter being the cause of the great rise in the Canal in July and August and also of its strong current during those months.

Although the supply from the Chun-ho is said to be continuous throughout the year, it is by no means regular, as in winter the Canal at Yang-kia-Chong is very low, only just navigable, whilst in summer there are about 30 feet of water in it: this rise is caused by the floods in Shantung and the North, by way directly of the Chun-ho.

Troubles are said to exist at Hai-chow-foo and gunboats and troops are arriving from the southward all day and are proceeding North by way of the locks and the Yeu-ho.

Started in afternoon to verify the above information, more especially that portion of it which referred to the Hung-tsze. Walked to Yang-kia-chong and halted for the night. It was here ascertained that the river from the Hung-tsze to the canal was dry in parts; and not navigable; thus it became necessary to reach Kaou-lien-ki (the first town on the lake, and distant 70 *li*) overland, and donkeys, &c., were hired for the purpose.

May 13th, 1867.—From Yang-kia-chong and Kaou-lien-ki Route S. by W. about 3 miles to Tau-pá, a village in the sharp curve of Canal just above the highest lock, and opposite which the creek from the Hung-tsze falls into the Canal. From here this creek could be seen flowing from the S. S. W. making a sinuous course, its breadth about 10 yards, and containing now a small quantity of water from this point to a distance of about 2 miles up: its banks point to a rise of about 6 or 8 feet in summer and at its junction with the Canal it falls (at this season) over a ledge of rocks about $1\frac{1}{2}$ feet high. The Canal too at this point flows as a small rapid over rocks, &c., which in two months hence will be covered with water some 15 feet deep. Ferried across Canal and proceeded about 8 miles S. S. W. along the dry bed of the Hung-tsze to a point where the creek and the bank, seen May 11th, converge and beyond which point the Hung-tsze summer floods, it is said, never extend under ordinary circumstances.

Took the road on top of the Flood-bank and marching S. by W. $6\frac{1}{2}$ miles, reached Kaou-lien-ki and stopped for the night.

May 14th, 1867.—Kaou-lien-ki, a miserable mud built village, stands on a portion of the bank jutting out into the lake and forms for itself a kind of harbour. There are large numbers of junks here, some of great size, trading between the lake ports to the S. W. and the Grand Canal, &c., &c., but not with Kaou-lien-ki which is merely the final port at this end of the lake and no place of trade.

Many hills were seen to the S. S. W. and S. W. One, a tolerably high one called Nor-jiu-san bearing S. 58° W. and distant about 12 or 15 miles, said to be 60 *li*. The Island marked on Du Halde's chart is not visible from here, it is said to bear about W. and is not high. The N. shore of the lake being perfectly flat and very low is soon lost to view as it stretches away to the S. W., but a small portion of it, covered with trees, and cropping up like an island, was seen bearing about W. N. W.

The bottom of this part of the lake is mud, and the water mud colour and very shallow, about 3 feet off Kaou-lien-ki, though further to the S. W. it is said to be much deeper.

The creek leading from the lake has been lately deepened and reembanked towards the lake end, and its channel cut and em-banked for some distance into the shallow lake itself; *i. e.* to within about 1 mile of Kaou-lien-ki.

Marched at 3.30 p. m. and followed the bank about 11 miles N. by E., and then struck off across the country about N. N. E. reaching S. gate T'sing-kiang 1.30 a. m., 15th.

May 15th, 1867.—This morning procured a native chart of this district from the "writer" which confirms the above observations and contains all the correct Chinese names of places, rivers, &c. At 1 p. m. set out for Chin-kiang and the southwards.

The Hung-tsze bank is in most places about 120 feet broad at the bottom, and at the highest point is about 30 feet, the lake level being higher than the general level of the country on the other side.

The "backwater" in the above sketch is a kind of marsh or shallow ditch about 300 or 400 yards wide generally, and it is probably formed by digging out earth for the construction of the bank, as it is evidently artificial: there is water in it now only in places, and wild fowl abound.

With regard to the date of the desiccation of the Yellow River, it is sometimes said to have occurred 15 years ago, 1852; and sometimes 14 years ago, 1853; it is generally stated however to

have become shallower and shallower for some few years previous to its actually leaving a dry bed, and from all I can hear it appears that it was not till the autumn of 1853 that it ceased to flow altogether.*

The Hung-tsze it will be seen from the foregoing notes is far within its former boundary. So large a diminution has taken place in the quantity of water in this lake as to leave a large tract of its bed open to cultivation and habitation, and to render many miles of the old Flood Bank useless. The present flood limit does not reach within 5 or 6 miles of the northern part of the bank save under exceptional circumstances such as in 1866† when it attained its old limit, the wall. The depth of water on the space now annually overflowed is at all times trifling, only a few inches; but formerly, it is said, and indeed the bank with its 15 feet of stone facing speaks for itself, the yearly rise was something very considerable. The date of this diminution of the lake's waters is equally uncertain to within a year or so, as is the affair of the Yellow River, and probably from the same cause; viz, its having occurred gradually. It is generally reported however to have happened 21 or 20 years ago *i.e.* in 1846 or 1847.

South of T'sing-kiang-pu the Grand Canal is called the See-min-ho and after receiving its double supply of water as above, it rises, in summer, some 10 or 12 feet above winter level and has a strong current. The current in May is very inconsiderable in any portion of the Canal between T'sing-kiang lock and Sau-pá, the point where it meets the flood tide from the Yang-tsze, I should say never more than about $\frac{3}{4}$ mile per hour; and this only for about the 10 or 15 miles of its course immediately below T'sing-kiang-pu. So much of the water however, is parted with through sluices in the East bank, for purposes of irrigation, that the current getting weaker and weaker on its way South becomes almost nil at the point where the canal enters the lake about 6 miles North of Kaou-yen. In the same way both the depth and breadth decline towards this point, it being here scarcely 10 yards broad and very shallow, whilst between Paou-ying and


* I am aware that this date is not considered correct; but it is derived from the information of a *number* of different persons resident in the neighbourhood, and as such only I give it, and do not vouch for its accuracy.

† In 1866 too the creek in the bed of the Yellow River (see May 11th) is said to have contained 10 feet of water for a few days during the floods.

T'sing-kiang it sometimes reaches a breadth of 150 yards and has everywhere abundance of water. Below Kaou-yen and after communication with the Kaou-yang lake the Canal again becomes broader and deeper, and the current somewhat stronger, although here too the sluices are at work draining off the water.

Many of the gunboats mentioned May 12th were seen returning on the 15th there not being enough water for them in the Yeu-ho; thus practically illustrating the unimportant nature of that river at this time of year, they would go to Hai-chow by way of Sien-nu-miaou, &c.

Although on May 12th, I was informed that the summer rise in the Canal was due to its Hung-tsze feeder it will have been seen that from the subsequent examination of those parts, it was found to be caused by floods from *both* the Hong-tsze and the Chun-ho *simultaneously*.



ARTICLE VII.

ECLIPSES RECORDED IN CHINESE WORKS.

By A. WYLIE.

SOLAR ECLIPSES.

Year.	Month.	Day of cycle.	R. A.		Book.	Section.
B. C. 2127	9	47		Much difference of opinion has existed as to the year. Total.	A	4
776	10	28			B	1
720	2	6			C	2
709	7	29			"	"
695	10				"	"
676	3				"	"
669	6	8			"	"
668	12	60			"	"
664	9	7			"	"
655	9	45			"	"
648	3	7			"	"
645	5				"	"
626	2	60			"	"
612	6	38			"	"

SOLAR ECLIPSES.

Year.	Month.	Day of Cycle.	R. A.		Book.	Section.
B. C.	601	7		Total.	0	7
	599	4			"	"
	592	6			"	"
	575	6			"	"
	574	12			"	"
	559	2			"	"
	558	8			"	"
	553	10			"	"
	552	9			"	"
		10			"	"
		17			"	"
	550	2			"	"
	549	1		Total.	"	"
		8			"	"
	546	12			"	"
	535	4			"	10
	527	6			"	"
	525	6			"	"
	521	7			"	"
	520	12			"	"
	518	5			"	"
	511	12			"	"

SOLAR ECLIPSES.

Year.	Month.	Day of cycle.	R. A.			Book.	Section.
B.C.	154	2	19	胃 2°	l. d.	E	27
	153	10	35		l. d.	"	5
	150	11	27	虛 9°	l. d.	"	"
	149	12	51		l. d.	"	27
	148	9	11		l. d.	"	"
	147	9	35	尾 9°	l. d.	"	"
	146	10	55		Almost total.	"	"
	145	7			l. d.	"	5
	144	7	48	軫 7°	l. d.	"	"
	143	7	42	翼 17°	This is recorded by Gaubil.	"	"
	139	2	23	奎 14°	Last day but one of the month.	E	27
	138	9	13	尾 2°	l. d.	"	"
	136	1	6			"	"
	134	2	53		l. d.	"	"
	"	7	20	翼 8°	Last day but one of the month.	"	"
	127	2	42	胃 3°	l. d.	"	"
	"	3	12		l. d.	"	"
	123	11	50		l. d.	"	6
	122	5	42	柳 6°	l. d.	"	27
	112	4	14	井 23°	l. d.	"	"
						"	"

[illegible]

SOLAR ECLIPSES.

Year.	Month.	Day of cycle.	R. A.		Book.	Section.
A. D.	2	9				
6	10	53		I. d. Total.	E	27
14	3	9		I. d.	Y	74
16	7	25		I. d.	"	"
25	1	7			"	"
26	1	1	危 8°		"	"
27	5	52	柳 14°		A	285
28	5	52		I. d.	F	28
29	9	3		I. d. Quoted in the commentary on F.	"	"
30	3				Y	74
"	9	3	尾 8°			
31	3	60	畢 5°		F	28
33	7	34		I. d.	"	"
35	6	50		Quoted in the commentary on F.	"	"
"	12	48		Do.	"	"
40	3	38	昂 7°	Do.	"	"
41	2	12	胃 9°	I. d.	F	28
46	5	33	柳 7°	I. d.	"	"
49	3	45	畢 15°	I. d.	"	"
50	2	25		Total. Quoted in the commentary on F.	X	"

A. D.	53	2	54	壁 5°
	55	5	10	柳 5°
	56	11	1	斗 20°
	60	8	9	底 2°
	61	8	3	
	62	2	32	Between 1 and 3 p.m. Quoted in the commentary on F.
	63	6	17	Invisible at the capital, but seen in the provinces. Com. on F.
	65	10	39	I. d. Not seen at Lo-yang the capital. Commentary on F.
	"	12		I. d. Total.
	"	8		Quoted in the commentary on F.
	"	10	41	Do.
	"	5	55	The 2nd section of the same work gives the 29th day of cycle.
	75	11	41	I. d.
	80	2	17	I. d.
	81	6	8	壁 6°
	84	8	32	翼 4°
	87	8	32	氏 4°
	90	2	19	I. d.
	91	8	32	奎 8°
	92	6	35	I. d.
	95	4	48	星 2°
	100	7	48	端 8°
	103	4	1	翼 22°
	107	3	10	井 2°
	109	3		I. d.
	111	1	17	2nd day of the month. Quoted in the commentary on F. Section 28.
				虛 8°

SOLAR ECLIPSES.

Year.	Month.	Day of cycle.	R. A.		Book.	Section.
A. D. 113	4	33	井 1°	1. d.	F	28
114	3	10	尾 10°		"	5
"	10	25	心 4°	1. d.	"	28
115	9	19	箕 5°	2nd day of month. Y makes this the 2nd month.	"	"
116	3	48	奎 9°		"	"
117	2	42	翼 18°		"	"
118	8	33	女 11°	Nearly total; stars all visible.	"	"
119	12	35	張 15°		"	"
120	7	22	氏 15°	1. d.	"	"
124	9	57	胃 12°		"	"
125	3	55	翼 9°		"	"
127	7	11	角 5°	& and Y both make this the 8th month.	"	"
135	In 7	24	女 11°		"	"
138	12	35	井 33°	1. d.	"	"
140	5	26	尾 11°	1. d.	"	"
141	9	48	室 3°		"	"
147	1	48	井 23°	1. d.	"	"
149	4	4	翼 4°	2nd day of month.	"	"
152	7	17			"	"

A. D.				H	12
259	7	25		H	12
260	1	22		"	"
261	5	44		"	"
262	11	36		"	"
266	7	43		"	"
"	10	43		"	"
271	10	14		"	"
272	10	8		"	"
273	4	5		"	"
"	7	34		"	"
274	1	32		"	"
"	3	60		"	"
275	7	21		"	"
277	1	13		"	"
278	1	7		"	"
283	3	38		"	"
285	8	23		"	"
286	1	51		"	"
287	1	45		"	"
288	1	9		"	"
"	6	37		"	"
299	11	1		"	"
300	1	16		"	"
"	4	28		"	"
301	In 3	23		"	"
306	1	25		"	"
"	7	22		"	"

I. d. & makes this the 6th month.

Y makes this the 44th day of cycle.

I. d.

Y makes this the 28th day of cycle.

SOLAR ECLIPSES.

Year.	Month.	Day of cycle.	R. A.			Book.	Section.
A. D.	12	19			Y makes this the 11th month.	H	12
306	11	45				"	"
308	1	13				"	"
312	2	49				"	"
316	6	54				"	"
"	12	21				"	"
317	5	13				"	"
"	11	13				"	"
318	4	14				"	"
325	11	30	斗井		7 a.m.	"	"
327	5	21				"	"
331	3	59				"	"
334	10	32				"	"
335	10	32				"	"
341	2	1			Y makes this the 31st day of cycle.	"	"
342	1	32			Y makes this the 56th day of cycle.	"	"
346	4	46				"	"
351	1	34				"	"
352	1	28				"	"
356	10	30	尾			"	"

SOLAR ECLIPSES.

Year.	Month.	Day of cycle.	R. A.		Book.	Section.
A. D. 440	4	55		I. d. K makes this the 8th month.	I	5
442	7	11			"	"
445	6	25			K	151
446	6	20			I	5
449	4	33			K	151
" 453	6	27		P makes this the 36th day of the cycle.	"	" 6
454	7	38			I	" 6
457	9	57			K	151
461	9	51			I	6
462	2	49			K	151
467	10	16		Quoted by Gaubil from the Wei History. K makes this the 34th day of cycle.	"	"
468	4	15			"	" 8
" 469	4	10			I	" 8
" 471	10	4			I	8
473	12	40			K	151
474	12	40		I. d. O makes this the 3rd month and 26th day of cycle.	I	9
477	1	10			K	151
477	10	48			"	"
478	2	22			"	"

SOLAR ECLIPSES.

Year.	Month.	Day of cycle.	R. A.		Book.	Section.
A. D. 522	5	29		Total. (O)	K	151
523	11	26			"	"
523	11	20		Sun rose eclipsed 7 digits on the S. W. limb.	"	"
525	10	46			Y	74
529	10	22		Sun eclipsed on the S. W. limb. Reported from 定州 Ting chow and 相州 Seang chow.	"	"
531	6	36		Sun eclipsed on the S. W. limb.	"	"
532	10	58		This and the preceding are probably different records of same eclipse.	"	"
533	4	56		Beginning of eclipse, direct south.	K	151
534	4	50			"	"
538	1	38		P makes this the 58th day of cycle. 11 a.m. to 1 p.m. (U)	"	"
540	6	38			O	7
547	1	36		Beginning of eclipse, S. W. 3 to 5 p.m. (U)	K	151
548	7	27		Beginning of eclipse, N. W.	"	"
550	5	53			J	2
561	4	13			M	5
561	10	11			"	"
562	9	5			J	3
563	3	2			M	5

A. D.	27	星	Y makes this the 44th day of the cycle.	M	5
564	8			"	"
" 565	7			"	"
566	1			"	"
567	1			"	"
" 568	11			"	"
569	11			"	"
570	10			"	"
571	4			"	"
572	3			"	"
" 573	9			"	"
574	2			"	"
575	2			"	"
" 576	12			"	"
577	6		5 to 7 a.m. (U)	M	6
578	11		l. d.	"	"
579	10			"	"
580	5			"	"
581	6			"	"
" 582	7		l. d. Z makes this the 1st day of 8th month.	"	"
583	1			"	"
" 584	1			"	"
585	1			"	"
" 586	6			"	"
587	10	星 6°	l. d. 6 digits on N.W. limb. Begin. 0.30 p.m. Mid. 1.15 p.m. End 2.15 p.m.	N	17
588	14	星 9°	l. d. 10 digits on W. limb. Begin. 7.30 a.m. Mid. 8.30 a.m. End 9.45 a.m.	"	"
589	5			"	"
590	2		l. d.	"	"

SOLAR ECLIPSES.

Year.	Month.	Day of cycle.	R. A.			Book.	Section.
A. D. 592	7	9				N	1
593	7	5				"	"
594	7					"	17
601	2	52				"	1
616	5	23				"	"
618	10	9	氏 5°			"	32
620	1					"	32
"	8					"	"
621	8	23	翼 4°			Q	32
623	12	39	斗 19°			"	"
626	10	53	氏 7°			"	"
627	In 3	50	胃 9°			"	"
"	9	47	亢 5°			"	"
628	3	45	畢 11°			"	"
629	8	6	翼 5°			"	"
630	In 1	4	室 4°			"	"
"	7	1	張 14°			"	"
632	1	52	虛 9°			"	"
634	5	8	參 7°			"	"

l. d.
l. d.
About midday the sun was eclipsed 8 digits, when it disappeared among the clouds.

Total.

A calculation quoted by Gaubil.
do.

SOLAR ECLIPSES.

Year.	Month.	Day of cycle.	R. A.		Book.	Section.
A. D. 692	4	33	11°	胃	Q	32
693	9	24	10°	角	"	"
694	9	19	13°	軫	"	"
695	2	22	5°	室	"	"
700	5	46	15°	畢	"	"
702	9	2		3 to 4 p.m. (U)	"	"
703	3	59	9°	角翼	"	"
"	9	27	7°	鬼	"	"
707	6	4	28°	井	"	"
"	12	2	21°	斗	"	"
712	9	4	10°	角	"	"
715	7	17	4°	張	"	"
719	5	26	15°	畢	"	"
721	9	6	15°	軫	"	"
724	In 12	53		Noon. (U)	"	"
729	10	55	9°	虛	"	"
732	2	11	10°	氏	"	"
"	8	8	7°	室	"	"
733	7	2	15°	翼	"	"
				張	"	"

SOLAR ECLIPSES.

Year.	Month.	Day of cycle.	R. A.		Book.	Section.
A. D. 968	12	46			A	283
970	4	8			"	"
971	10	60			"	"
972	9	54			"	"
974	2	17			"	"
975	7	8			"	"
977	11	24			"	"
979	9	17			"	"
981	9	32			"	"
982	3	30			"	"
"	11	55			"	"
983	2	25			"	"
985	12	37			"	"
986	6	35			"	"
991	1n2	8			"	"
992	2	2			"	"
993	2	56			"	"
"	8	53			"	"
994	7	48			"	"
"	12	15			"	"
997	5	1			"	"

Obscured by clouds at Hang-chow. (D)

A. D.	998	55	10	23	13	283
	"	9	17	999	"	"
	1000	3	15	1000	"	"
	1002	7	31	1002	"	"
	1004	12	17	1004	"	"
	1006	5	39	1006	"	"
	1007	5	33	1007	"	"
	"	10	31	"	"	"
	1009	3	53	"	"	"
	1012	8	33	"	"	"
	1013	12	55	"	"	"
	1014	12	50	"	"	"
	1015	6	46	"	"	"
	1019	3	55	"	"	"
	1020	7	47	"	"	"
	1021	7	11	"	"	"
	1022	7	1	"	"	"
	1024	5	24	"	"	"
	1026	10	11	"	"	"
	1028	3	33	"	"	"
	1029	8	24	"	"	"
	1033	6	31	"	"	"
	1036	4	46	"	"	"
	1038	1	53	"	"	"
	1040	1	53	"	"	"
	1042	6	9	"	"	"

Total.

Obscured by clouds at Hang-chow.

Obscured by clouds at Hang-chow.

Obscured by rain at Hang-chow.

This occurred in the night time. It was predicted for daylight.

It was calculated for total; but only extended to 4 digits.

Almost total.

This was not observed according to prediction.

2½ digits. It occurred before sunrise, and was invisible at the capital.

6 digits. Ended about ¼ past 3 p.m.

5 digits. About 6.30 p.m. it became invisible in the haze.

SOLAR ECLIPSES.

Year.	Month.	Day of cycle.	R. A.		Book.	Section.
A. D. 1043	5	4		<p>This occurred at night. It was predicted for daylight. Obscured by clouds at Hang-chow. 4½ digits. Ended about 3.45 p.m. 1 digit. (A) Noon. (U) 2 digits barely. Ended about 2.15 p.m. About 0.15 p.m. Eclipsed 4½ digits. (A) 1.15 p.m. (U) Eclipsed more than 9 digits, on the S. W. limb. Middle about 4.15 p.m. Rain and thunder at Hang-chow. 2 digits. 3½ digits. Eclipsed more than 3 digits. Ended about 1.45 p.m. At 1 p.m. it was eclipsed 4 digits at Hang-chow when it disappeared among the clouds. 1.30 p.m. (U) 7.45 a.m. (U) Obscured by clouds. Obscured by clouds. (D) Obscured by clouds. (D) 10.30 a.m. (U)</p>	A	283
1044	11	45			"	"
1045	4	24			"	"
1046	3	18			"	"
1049	1	31			"	"
1052	11	39			"	"
1053	10	33			"	"
1054	4	31			"	"
1056	8	47			"	"
1058	8	36			"	"
1059	1	33			"	"
1061	6	49			"	"
1066	9	49		<p>Obscured by clouds. (D) 10.30 a.m. (U)</p>	"	"
1068	1	11			"	"
1069	7	2			"	"
1073	4	11			"	"
1075	8	27			"	"
1078	6	40			"	"
1080	11	26			"	"

A. D.	1081	11	20			D	89
	1082	4	49	Obscured by clouds.		"	"
	1083	9	40		A	283	24
	1087	7	47	Obscured by clouds.	S	25	"
	1091	5	56		"		"
	1094	3	9	2.30 p.m. (U)			
	1095	2		Recorded by Gaubil, as having occurred at night.	A	283	
	1096	2	4		D	90	
	1097	6	20		"	26	"
	1099	10	51	Total.	D	90	"
	1100	4	34		"		
	1101	4	28		D		
	1106	7	17		"		
	"	12	49	This was predicted but not seen.	D	91	
	1107	11	49		"		
	1108	5	47	Recorded by Gaubil, as predicted, but not seen.	"		
	1110	9	3	1.30 to 3. p.m. (U)	"		
	1113	3	49		"		
	1115	7	5		"		
	1118	5	19		"		
	1119	4	13		"		
	1120	10	5		"		
	1122	2	27		"		
	1123	8	18	Obscured by clouds. (D)	"	29	"
	1129	9	43		S	2	"
	1135	1	43	D makes this the 42nd day of cycle.	T	3	"
	1137	2	30		"		
					D	93	"

SOLAR ECLIPSES.

Year.	Month.	Day of cycle.	R. A.		Book.	Section.
A. D. 1140	7	40			T	4
1143	12	20			"	"
1144	6	18			"	"
1145	6	12			"	"
1147	10	28			"	"
1148	4	25			"	"
1149	3	20			"	"
1154	5	50			"	"
1155	5	44		Obscured by clouds. (D)	"	"
1158	3	58		Obscured by clouds.	"	"
1160	7	14			"	"
	8	43			"	"
1161	1	11			"	"
1162	1	5			"	"
1163	6	57		3. to 4. p.m. (U)	"	"
1164	6	51			"	"
1167	4	5			"	"
1169	8	21		Obscured by rain.	"	"
1173	5	29			"	"
1174	11	21			"	"
1176	3	43		Obscured by clouds. (D)	"	"

SOLAR ECLIPSES.

Year.	Month.	Day of cycle.	R. A.		Book.	Section.
A. D. 1235	2	1		Calculation, not verified.	D	97
1237	12	15			"	"
1242	9	17			"	"
1243	3	14		9.30 a.m. (U)	"	"
1245	7	30			"	"
1246	1	28			"	"
1249	4	39			"	"
1252	2	52			"	"
1253	2	46			"	"
1260	3	5		2.30 p.m. (U)	"	"
1261	3	59			U	48
1265	1	8			"	6
1267	5	24			"	"
1268	10	15			"	"
1270	3	37			"	"
1271	8	29			"	"
1272	8	23			"	"
1275	6	37			"	"
1277	10	53		Noon. (U)	"	8
1282	6	26			"	9
"	7	55			"	13
"					"	"

14	48	16	17	18	19	20	"	"	21	"	24	48	26	"	"	27	28	30	33	35	"	38	39	"	"	40
U	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"

A. D.	1287	10	55
1289	3	17	8
1290	8	8	8
1292	1	31	17
1294	6	17	30
1297	4	4	46
1299	8	8	44
1300	2	44	60
1302	6	60	55
1303	In5	55	50
1304	5	50	2
1312	6	2	15
1315	4	15	30
1318	2	30	24
1319	2	24	18
1320	1	18	40
1321	6	40	31
1322	11	31	33
1327	9	33	53
1329	7	53	41
1331	8	41	9
"	11	9	55
1334	4	55	11
1336	8	11	9
1337	2	9	60
1338	8	60	37
1342	8	37	

SOLAR ECLIPSES.

Year.	Month.	Day of cycle.	R. A.		Book.	Section.
A. D. 1842	10	36			U	40
1843	4	33			"	41
1844	9	24			"	"
1845	9	19			"	"
1846	2	47			"	"
1847	1	41			"	"
1848	7	33			"	"
1849	11	55			"	"
1850	11	49			"	42
1851	5	46			"	"
1852	4	40			"	"
1853	9	2			"	43
1854	3	40			"	"
1857	1	13			"	45
1858	6	5			"	48
"	11				"	"
"	12	2			"	"
1860	5	24			U	45
1861	4	18			"	"
1864	4	31			"	48
"	8	29			E	10
					U	46
Total.						

The 48th section makes this the 60th day of cycle.

This is recorded by Gaubil.

A. D.	1366	7	18	U	47
	1367	6	43	"	"
		12	40	"	"
	1368	5	7	"	"
	1369	5	31	"	"
	1371	9	47	"	"
	1373	3	40	"	"
	1374	2	34	"	"
	1375	7	56	"	"
	1376	7	50	"	"
	1377	12	42	"	"
	1379	12	42	"	"
	1381	10	49	"	"
	1383	8	9	"	"
	1386	12	20	"	"
	1388	5	11	"	"
	1389	9	3	"	"
	1390	9	27	"	"
	1391	3	25	"	"
	1393	7	41	"	"
	1397	5	49	"	"
	1399	3	3	"	"
	1406	6	56	"	"
	1407	10	18	"	"
	1408	4	16	"	"
		10	12	"	"
	1409	9	7	"	"

Obscured by clouds.

SOLAR ECLIPSES.

Year.	Month.	Day of cycle.	R. A.		Book.	Section.
A. D. 1413	1	18			V	6
1414	1	13			B	216
"	6	3			"	"
"	11	31			"	"
1415	5	34			V	4
1416	5	29			B	216
1417	4	54			"	"
"	10	20			"	"
1420	8	34			V	7
1421	8	28			"	"
1422	1	56			"	"
1423	6	47			"	"
1425	10	3			B	216
1430	8	6		Obscured by rain.	V	9
1432	1	58			"	"
1435	11	5			"	"
1439	8	13			B	216
1440	1	41			"	"
1441	1	36		Not observed.	V	10
"	7	33			B	216
1442	6	27			"	"

SOLAR ECLIPSES.

Year.	Month.	Day of cycle.	R. A.		Book.	Section.
A. D. 1484	9	22			V	14
1485	8	16			"	"
1486	2	34			B	216
1488	6	30			V	15
1489	10	21			B	216
"	12	21			V	15
1494	3	16			B	216
1495	2	52			V	15
"	3	22			B	216
"	8				"	"
1498	In 11	59			V	216
1500	5	51			"	"
1501	9	13			"	"
1502	5	7			"	"
"	9	7			B	216
1506	3	12			V	15
1507	1	12			B	216
1514	8	28			V	16
1515	12	50			"	"
1517	6	42			"	"
1518	5	36			"	"
			Total. 8 dig. 67 m.			

SOLAR ECLIPSES.

Year.	Month.	Day of cycle.	Longitude.	Portion eclipsed.	Beginning.	Middle.	End.	Book.	Section.
A. D. 1582	6	24						V	20
1583	11	16						"	"
1587	9	24						"	"
1589	1	46		Obscured by clouds.				"	"
1590	7	37						"	"
1593	10			2 digits.				"	"
1594	4	46						B	216
1596	In 8	2						V	20
1603	4	24						"	"
1604	4	18						"	"
1607	2							"	"
1610	11	39		Not visible.	Recorded by Guabil.			V	21
1612	5	31						"	"
1615	3	44						"	"
1616	3	8						"	"
1617	7	60						"	"
1621	4	9						"	"
1626	7	8						"	"
1629	5	22		Obscured by clouds.				"	"
1631	10	38						"	"
1634	3	24						"	"

SOLAR ECLIPSES.

Year.	Month.	Day of cycle.	Longitude.	Portion eclipsed.	Beginning.	Middle.	End.	Book.	Section.
A. D. 1709	8	36	張 9° 26'	4 dig. 54 m.	6.8 a.m.	6.59 a.m.	7.59 a.m.	C	263
1712	6	50	井 10° 32'	5 " 41 "	8.40 "	4.31 "	5.25 "	"	"
1715	4	3	箕 12° 19'	6 " 12 "	6.11 p.m.	7.2 p.m.	7.51 p.m.	"	"
1719	1	11	房 0° 45'	0 " 7 "	8.7 "	4.20 "	5.29 "	"	"
1720	7	3	柳 5° 16'	7 " 2 "	10.34 a.m.	0.12 "	1.45 "	"	"
1721	In 6	57	井 29° 42'	4 " 2 "	5.7 p.m.	5.59 "	6.47 "	"	"
1730	6	35	井 20° 42'	9 " 22 "	11.1 a.m.	0.46 "	2.30 "	"	"
1731	12	27	斗 0° 26'	9 " 11 "	6.53 "	7.25 a.m. sun rose eclipsed 6 dig. 40 m.		"	"
1735	9	34	角 2° 5'	8 " 21 "	7.47 "	7.49 a.m.	9.5 a.m.	"	"
1742	5	56	畢 7° 17'	7 " 4 "	6.41 "	8.59 "	10.18 "	"	"
1745	3	10	壁 6° 49'	1 " 10 "	10.57 "	7.37 "	8.38 "	"	"
1746	3	4	室 11° 23'	6 " 57 "	9.35 "	11.46 "	0.30 p.m.	"	"
1747	7	26	柳 6° 33'	2 " 21 "	4.59 p.m.	11.5 "	0.40 "	"	"
1751	5	34	昂 7° 37'	4 " 41 "	6.49 a.m.	5.40 p.m.	6.18 "	"	"
1758	12	50	斗 1° 51'	8 " 51 "	3.5 p.m.	7.39 a.m.	8.33 a.m.	"	"
						4.20 p.m.	4.36 p.m. sun set eclipsed 7 dig. 23 m.	"	"
1760	5	41	參 1° 17'	9 " 42 "	4.26 "	5.27 p.m.	6.23 p.m.	"	"
1762	9	57	角 3° 26'	5 " 40 "	4.50 "	5.28 p.m. sun set eclipsed 6 dig. 40 m.		"	"

A. D.	1763	9	52	軫 6° 1'	7 dig. 7 m.	6.9 a.m.	6.18 a.m.	sun rose eclipsed 1 dig. 34 m.	C	263
	1769	5	19	畢 8° 38'	3 " 35 "	5.5 p.m.	7.2 a.m.	8. a.m.	"	"
	1770	5	14	昴 7° 34'	3 " 53 "	7.35 a.m.	5.47 p.m.	6.23 p.m.	"	"
	1773	3	27	室 12° 37'	4 " 12 "	1.18 p.m.	8.26 a.m.	9.22 a.m.	"	"
	1774	8	19	張 10° 53'	3 " 51 "	7.14 a.m.	2.40 p.m.	3.54 p.m.	"	"
	1775	8	13	張 0° 6'	4 " 33 "	11.21 "	8.12 a.m.	9.18 a.m.	"	"
	"	12	41	斗 23° 43'	1 " 47 "	9.36 "	0.52 p.m.	2.17 p.m.	"	"
	1784	7	51	柳 16° 21'	1 " 55 "	5.32 "	10.20 a.m.	11.6 a.m.	"	"
	1785	7	45	柳 5° 34'	4 " 17 "	6.42 "	6.14 "	6.59 "	"	"
						6.42 "	7.43 "	8.53 "	"	"

LUNAR ECLIPSES.

Year.	Month.	Day of cycle.	R. A.			Book.	Section.
B. C. 436						W	11
209						D	12
141	10					F	"
A. D. 62	7					"	"
89	In 7					"	"
100	1					"	"
146	12					"	"
157	11					"	"
	12	59				F	28
165	1	18				"	"
175	12					"	"
179	8					"	"
221	7					"	"
307						H	
311	3	9				"	12
						"	12.
434	7	13	室 15°			"	"
436	12	6	鬼 4°			"	"
437	5		斗 26°			"	"

This is recorded by Gaubil, in Souciet's "Observations Mathématiques, &c." Tome 3, p. 367.

This is quoted in the 太平御覽 *T'ae ping yü lán*. Book 4.

This is recorded by Gaubil.

This is recorded by Gaubil.

This is recorded as twice total the same night, in the 3rd and 4th watches.

Begin. 4th watch 2 chang. Total, 4th watch 4 chang.

Begin. 9. to 11. p.m. Total, 1st watch 3 chang.

Total. 4th watch.

A. D.	12	11	Chinese	Notes	I	12
437	12	11	斗	Begin. 2 watch 4 chang. Total, 3 watch 1 chang.	I	12
438	5		斗		"	"
440	9		斗	Begin. 2 watch 1 chang. In the 3rd watch eclipsed 12 digits.	"	"
451	8		斗	4th watch.	"	13
459	9		斗	Total, 2nd watch.	"	"
467	10	30	斗	Seen at intervals between dark clouds.	K	151
478	9	57	斗		"	"
480	2	19	斗		"	"
482	1	8	斗		"	"
"	7	4	斗		"	"
484	5	24	斗	Total.	"	"
485	11	15	斗	Seen at intervals between dark clouds.	"	"
487	9	35	斗	Total.	"	"
488	9		斗	7 digits.	"	"
489	2	26	斗	A little cloudy.	"	"
"	8	23	斗		"	"
491	1	46	斗	Total.	"	"
"	12	28	斗		"	"
492	12	34	斗		"	"
494	4	57	斗		"	"
496	10	43	斗		"	"
498	2	14	斗		"	"
499	2	59	斗		"	"
500	1	53	斗	3 digits.	"	"
503	5	4	斗	Moon rose eclipsed 12 digits.	"	"

LUNAR ECLIPSES.

Year.	Month.	Day of cycle.	R. A.		Book.	Section.
A. D. 505	9	20	昴	10 digits.	K	151
506	3	17	氏	Total.	"	"
509	1	31	翼	12 digits.	"	"
510	1	25	張		"	"
"	In	22	危		"	"
"	12	19	張		"	"
513	4	36	箕	Moon rose eclipsed 12 digits, and gradually became total.	"	"
"	10	33	參	Total.	"	"
514	4	30	尾	14 digits. Moon rose eclipsed.	"	"
515	8	46	奎	8 digits.	"	"
516	3	44	軫		"	"
"	8	44	婁	Total.	"	"
"	12	57	柳	10 digits.	"	"
522	12	51			"	"
523	5	44			"	"
"	11	46	井		"	"
525	9	54	參		"	"
530	3	1			"	"
"	5	21		U makes this the 27th day of cycle, between 11. p.m. and 1. a.m.	"	"

A. D.	531	5	21	箕 參 元	Total.		K	151
532	4	15	15				"	"
534	10	13	13				"	"
535	3	35	35				"	"
536	2	24	24				"	"
538	6	40	40				"	"
539	10	31	31				"	"
541	4	29	29				"	"
543	3	43	43				"	"
549	11	4	4				"	"
570	9	57	57	雙	Total. The moon did not appear after its emersion.	M	"	"
577	1	13	13			A	5	285
584	12	40	40	鬼 3°	10 digits. Begin. N.E. 1 watch 1 chow, Mid. 1 watch 4 chow, End. 2 watch 1 chow.	N	17	
586	6				Begin. E. obscured by clouds. Reaching S.E. the moon was seen through the clouds $\frac{3}{4}$ eclipsed; when clouds from the N.E. limb again covered it. Towards the S. point it gradually decreased; and when seen through the clouds beyond the S. point, the eclipse was over.			
590	3	40	40	氐 7°	Moon rose half eclipsed on the E., at E.S.E. it was about $\frac{3}{4}$ eclipsed; and then decreased to S.S.E.	"	"	"
"	9	37	37	胃 4°	12 digits on S. limb. Begin. 0.30 p.m. Mid. 2. p.m. End. 3.23 p.m.	"	"	"
592	7	56	56	室 7°	11 digits on N.W. limb. Begin. 1 watch 3 ch.	"	"	"
593	7				8 digits on N.E. limb, was eclipsed at 5 watch 1 ch. when it disappeared among the clouds.	"	"	"

LUNAR ECLIPSES.

Year.	Month.	Day of cycle.	R. A.			Book.	Section.
A. D. 595	11	7	井 17°	11 digits on the N.W. limb. Begin. S.E. 1 watch 4 ch. Mid. S.S.E. 2 watch 3 ch. End. S. 3 watch 1 ch.	N	17	
596	11	2	井 17°	3 watch 1 chow the moon was seen through the clouds, on the meridian, eclipsed 3 digits on the E. limb. At the 4th watch it was total, and was off on the S.E. limb. At 4 watch 3 ch. it ended on the S.W. limb. U makes this the 1st day of cycle.	N	17	
618	9	54			Z	42	
619	In 2	16			"	"	
621	12	4			"	"	
623	6	57			"	"	
"	12	54			"	"	
624	11	52			"	"	
625	4	52			"	"	
626	10	7			"	"	
628	2	29			"	"	
629	2	24			"	"	
630	7	15			"	"	
632	6	34			"	"	
"	11	32			"	"	
633	5	28			"	"	

LUNAR ECLIPSES.

Year.	Month.	Day of cycle.	R. A.		Book.	Section.
A. D.	4	7			Z	42
673	8	23			"	"
675	2	21			"	"
676	7	12			"	"
677	9	23			"	"
680	12	34			"	"
"	3	45			"	"
682	9	37			"	"
683	2	54			"	"
684	8	31			"	"
"	7	50			"	"
686	10	42			"	"
687	6	18			"	"
688	10	1			"	"
689	4	58			"	"
690	10	22			"	"
691	2	12			"	"
693	7	58			"	"
695	6	22			"	"
697	1	8			"	"
699	1	3			"	"
700					"	"

LUNAR ECLIPSES.

Year.	Month.	Day of cycle.	R. A.		Book.	Section.
A. D. 910	12	7			A	285
925	3	45			"	"
"	9	41			"	"
928	12	52			"	"
929	6	50			"	"
"	12	47			"	"
937	7	3			"	"
940	11	14			"	"
944	3	25			"	"
"	9	22			"	"
947	12	32			"	"
967	11			Began, 4 watch 4 teen. This was calculated by the Leaou astronomers, but did not occur according to prediction.	U	53
968	11	27			B	217
969	10	25			A	285
970	4	22			"	"
972	8	39			"	"
974	8	27		This did not occur according to prediction.	"	"
977	6	41		Total.	"	"
"	11	39			"	"
978	10	3		Obscured by clouds and invisible.	"	"

LUNAR ECLIPSES.

Year.	Month.	Day of cycle.	R. A.		Book.	Section.
A. D. 1007	5	48		Obscured by clouds and invisible. This did not occur according to prediction.	A	285
" 1008	9	15			"	"
1009	9	10			"	"
1010	9	4		This did not occur according to prediction.	"	"
1010	2In	1			"	"
1012	1	21		Obscured by clouds and invisible.	"	"
"	7	17			"	"
"	12	14			"	"
1015	10	28			"	"
1016	4	26		Obscured by clouds and invisible.	"	"
1018	4	19			"	"
"	10	17			"	"
1020	2	39			"	"
1021	8	30			"	"
1024	5	39			"	"
1026	5	55			"	"
1042	9	24		This did not occur according to prediction.	"	"
1045	4	37			"	"
"	9	35			"	"
1046	9	29			"	"
1050	7	37			"	"

A. D.	1052	11	35	Began at 4. a. m.	U	53
	1053	10	48		A	285
	1055	9	7		"	"
	1056	8	1		"	"
	1057	2	59		"	"
	"	8	55		"	"
	1058	12In	18		"	"
	1059	6	15		"	"
	"	12	12		"	"
	1060	12	6		"	"
	1062	10	26		"	"
	1063	10	20		"	"
	1064	4	17	Greatest at 6.45 a. m.	U	53
	1067	2	31		A	285
	1068	7	22		"	"
	1069	11In	44	Begin. 10.30 p. m. Middle 12.15 a. m. End 2. a. m.	U	53
	1070	5	42	Rainy and invisible.	A	285
	1071	5	36		U	53
	"	11	33	Begin. 5.30 a. m. Middle 6.30 a. m.	"	285
	1073	3	55	Begin. 9.15 p. m. Middle 10.30 p. m. End 12 p. m.	A	53
	"	9	52	Begin. 4 watch 5 teen. Total 5 watch 3 teen.	U	285
	1074	9	46		A	53
	1076	1	9		U	285
	1077	1	3		A	53
	"	7	60	Cloudy and invisible.	"	"
	1078	1	57		"	"
	"	6	55		"	"

LUNAR ECLIPSES.

Year.	Month.	Day of cycle.	R. A.		Book.	Section.
A. D. 1079	6	49		Cloudy and invisible.	A	285
1080	10	11		Cloudy and invisible.	"	"
1081	4	8			"	"
	10	18			"	"
1082	10	60			"	"
1083	8	24		This did not occur according to prediction.	"	"
1084	2	22		Cloudy and invisible.	"	"
"	8	18		Cloudy and invisible.	"	"
1085	8	13			"	"
1086	12	35		Cloudy and invisible.	"	"
1088	6	27			"	"
	12	24		Cloudy and invisible.	"	"
"	5	21			"	"
1089	5	15		Cloudy and indistinct.	"	"
1090	4	40		Cloudy and indistinct.	"	"
1091	3	35			"	"
1092	9	26		Cloudy and invisible.	"	"
1093	7	40		Cloudy and invisible.	"	"
1096	1	37		Cloudy and invisible at first; visible afterwards.	"	"
1097	5	59		Did not appear as predicted.	"	"
1098	5	53			"	"
1099	5				"	"

A	285
"	"
"	"
"	"
"	"
U	53
A	285
"	"
"	"
"	"
"	"
"	"
"	"
"	"
"	"
"	"
"	"
"	"
"	"
"	"
"	"
"	"
"	"
"	"
"	"
"	"
"	"
"	"
"	"

Middle 4.45 p.m. End 7. p.m.

Obscured by clouds and invisible.
This occurred contrary to calculation.

A. D.	1099	10	51
	1100	10	45
	1103	2	1
	"	8	58
	1104	2	56
	"	8	53
	1105	12	15
	1106	6	12
	"	12	9
	1109	10	23
	1110	4	21
	"	9	17
	1111	3	15
	"	9	11
	1113	6	34
	"	7	31
	1114	1	28
	1116	11	42
	1117	11	36
	1118	5	33
	1120	3	53
	1124	1	60
	"	12	55
	1129	2	19
	1131	8	16
	1132	2	13
	"	7	11

LUNAR ECLIPSES.

Year.	Month.	Day of cycle.	R. A.		Book.	Section.
A. D. 1133	7	5			A	285
1134	12	27				
1135	11	22			T	20
1136	5	18			A	285
"	11	16				
1138	3	38			"	"
"	9	34			"	"
1139	9	29			"	"
1142	7	43		Cloudy and invisible.	"	"
1143	6	37			"	"
"	12	35		Cloudy and invisible.	"	"
1144	6	31			"	"
1145	5	56			"	"
1146	4	51		Cloudy and invisible.	"	"
1151	2	53			T	20
1152	12	13		Visible at Peking. Obscured by clouds at Hangchow.	"	"
1153	12	7			"	"
1154	3	18			"	"
"	11	1			"	"
1155	5	59			"	"
1157	9	14			A	285
					"	"

LUNAR ECLIPSES.

Year.	Month.	Day of cycle.	R. A.		Book.	Section.
A. D. 1190	12	32		A marks this on the 42nd day of the cycle. Visible at Peking. A makes this the 9th month, cloudy and invisible at Hangchow.	T	20
1191	6	29			"	"
1192	4	54			"	"
1193	9	45			"	"
1194	10	40		A makes this the 7th month. Total.	"	"
1196	8	59			"	"
1197	2	56			"	"
1198	1	51			"	"
1200	7	47		Visible at Peking. Cloudy and invisible at Hangchow. A gives this the 29th day of the cycle. A makes this the 2nd month, rainy and invisible at Hangchow.	"	"
1201	5	7			"	"
1201	11	58			"	"
1202	5	56			"	"
1203	3	20			"	"
1204	9	12			"	"
1205	3	9			"	"
1207	8	6			"	"
1207	1	28			"	"
1207	7	25			"	"
1208	1	23			"	"
"	12	17			A	285

LUNAR ECLIPSES.

Year.	Month.	Day of cycle.	Longitude.	Portion eclipsed.	Beginning.	Total immersion.	Middle.	Emersion.	End.	Book.	Section.
A. D.	6	59		Total.						U	27
1320	4	8		Total.						"	29
1324	3	40		Total.						"	16
1334	3	34								"	38
1335	1	53								"	39
1337	6	39								"	40
1339	5	59		Total.						"	"
1341	10	55								"	"
"	10	44								"	"
1343	10	12								"	"
1344	In 2									"	"
1353	3									"	"
1388	4									"	"
1403	1	30								"	"
1450	1	28								"	"
1460	In 11									"	"
1479	11	35								"	"
1518	10									"	"
1519	9									"	"
"	10									"	"
1548	3									"	"

This is a preannouncement in an imperial rescript, 2nd moon.

Eclipsed at 6.45 a.m.

G notices this, but not as an intercalary month.

LUNAR ECLIPSES.

Year.	Month.	Day of cycle.	Longitude.	Portion eclipsed.	Beginning.	Total immersion.	Middle.	Emersion.	End.	Book.	Section.
A. D.				dig. m.							
1652	8	52	室 6° 37'	8 36	0.47 a.m.	5.39 p.m.	2.24 a.m.	7.40 p.m.	4.1 a.m.	C	264
1653	7	46	危 16° 24'	15 49	4.46 p.m.		6.40 p.m.		8.34 p.m.	"	"
1655	12	3	井 21° 2'	9 4	2.46 a.m.		4.26 a.m.		6.6 a.m.	"	"
1656	In 5	59	斗 9° 25'	13 5	7.42 p.m.	8.49 "	9.39 p.m.	10.30 "	11.37 p.m.	"	"
"	11	57	井 10° 6'	15 47	4.45 "	5.41 "	6.40 "	7.39 "	8.85 "	"	"
1657	5	54	箕 8° 19'	10 45	2.35 a.m.	3.42 a.m.	4.26 a.m.	5.9 a.m.	6.16 a.m.	"	"
"	11	52	宿 10° 30'	3 25	1.44 "		2.53 "		4.1 "	"	"
1659	In 3	14	氏 5° 50'	7 36	2.10 "		3.42 "		5.14 "	"	"
1660	3	8	亢 6° 9'	16 42	3.9 p.m.	4.10 p.m.	5.8 p.m.	6.6 p.m.	7.7 p.m.	"	"
"	9	4	奎 7° 58'	18 14	6.0 "	6.56 "	7.57 "	8.57 "	9.54 "	"	"
1661	3	2	角 6° 3'	3 37	10.21 "		11.33 "		0.44 a.m.	"	"
1663	7	19	虛 6° 51'	15 40	2.6 a.m.	3.17 a.m.	3.56 a.m.	4.35 a.m.	5.55 "	"	"
1664	1	15	星 0° 11'	16 25	8.27 p.m.	9.20 p.m.	10.21 p.m.	11.22 p.m.	0.15 "	"	"
1666	5	32	尾 15° 0'	2 38	2.4 a.m.		3.5 a.m.		4.7 "	"	"
"	11	29	宿 0° 49'	7 47	8.47 p.m.		10.28 p.m.		0.8 "	"	"
1668	10	17	昂 1° 44'	5 31	9.34 "		11.0 "		0.25 "	"	"
1670	In 3	40	軫 9° 50'	8 0	5.22 "		7.4 "		8.47 p.m.	"	"
1671	2	22	翼 15° 46'	17 7	5.9 "	6.18 p.m.	7.12 "	8.7 p.m.	9.16 "	"	"

A. D.			dig. m.	0.41 a.m.	1.37 a.m.	2.37 a.m.	3.37 a.m.		C	264
1671	8	32	16 39	0.41 a.m.	1.37 a.m.	2.37 a.m.	3.37 a.m.	4.33 a.m.	"	"
1672	2	28	4 11	8.53 p.m.	3.32	10.8 p.m.	5.6	11.23 p.m.	"	"
1674	6	45	11 41	2.26 a.m.	2.17	4.19 a.m.	4.15	6.13 a.m.	"	"
"	12	43	15 50	1.21 "	"	3.16 "	"	5.11 "	"	"
1677	10	55	6 0	5.28 p.m.	11.35 p.m.	6.56 p.m.	1.32	8.24 p.m.	"	"
1678	In 3	54	17 44	10.34 "	3.13 a.m.	0.34 a.m.	5.14	2.33 a.m.	"	"
"	9	50	18 40	2.16 a.m.	"	4.13 "	"	6.11 "	"	"
1679	3	48	4 37	5.11 "	"	6.33 "	"	7.54 "	"	"
"	9	44	6 9	5.47 p.m.	"	7.15 p.m.	"	8.40 p.m.	"	"
1681	1	6	7 52	5.25 "	5.49	7.4	7.52	8.42 "	"	"
1682	1	1	16 46	4.56 a.m.	"	6.50 a.m.	"	8.45 a.m.	"	"
1683	1	55	4 12	9.25 p.m.	"	10.38 p.m.	"	11.52 p.m.	"	"
1684	11	15	7 40	4.57 a.m.	0.37	6.36 a.m.	2.35	8.14 a.m.	"	"
1685	5	12	14 31	11.42 p.m.	5.30	1.36 "	7.20	3.29 "	"	"
"	11	9	18 13	4.20 a.m.	"	6.25 "	"	8.30 "	"	"
1686	In 4	6	8 52	5.10 p.m.	"	6.49 p.m.	"	8.28 p.m.	"	"
"	10	3	5 47	5.39 a.m.	"	7.7 a.m.	"	8.35 a.m.	"	"
1688	3	26	7 22	0.35 "	*2.34 a.m.	2.13 "	3.25	3.51 "	"	"
"	9	22	7 14	5.19 p.m.	"	6.51 p.m.	"	7.23 p.m.	"	"
1689	3	20	18 3	0.26 a.m.	"	2.30 a.m.	"	4.34 a.m.	"	"
1690	2	14	4 52	4.46 "	"	5.56 "	"	7.16 "	"	"
"	8	11	4 13	8.12 p.m.	"	9.27 p.m.	"	10.42 p.m.	"	"
1691	12	33	8 49	8.14 "	5.40 p.m.	9.53 "	"	11.31 "	"	"
1693	6	24	13 32	4.38 "	"	6.34 "	"	7.27 "	"	"

* This is probably a misprint for 1.34 a.m.

LUNAR ECLIPSES.

Year.	Month.	Day of cycle.	Longitude.	Portion eclipsed.	Beginning.	Total immersion.	Middle.	Emersion.	End.	Book.	Section.
A. D.				dig. m.						C	264
1693	12	22	井 20° 54'	3 31	6.14 p.m.		7.26 p.m.		8.38 p.m.	"	"
1695	4	44	心 3° 41'	5 12	5.32 "		6.52 "		8.12 "	"	"
"	10	41	泉 2° 59'	5 45	1.36 a.m.		3.2 a.m.		4.28 a.m.	"	"
1697	9	30	箕 7° 19'	6 32	2.23 "		3.52 "		5.20 "	"	"
1699	2	52	翼 6° 2'	7 23	1.29 "		3.5 "		4.41 "	"	"
"	17	49	危 17° 33'	8 19	4.41 p.m.		6.22 p.m.		8.4 p.m.	"	"
1700	7	43	危 6° 43'	16 47	6.37 "	7.47 p.m.	8.41 "	9.35 p.m.	10.45 "	"	"
1701	1	41	張 2° 47'	4 26	5.59 a.m.		7.15 a.m.		8.30 a.m.	"	"
"	7	37	虛 5° 52'	3 10	8.22 p.m.		9.29 p.m.		10.35 p.m.	"	"
1704	5	52	尾 15° 12'	10 3	0.33 a.m.	1.31 a.m.	2.17 a.m.	2.59 a.m.	4.1 a.m.	"	"
1706	9	8	奎 9° 29'	6 43	1.52 "		3.21 "		4.51 "	"	"
1707	9	2	壁 12° 10'	18 1	4.46 p.m.	5.43 p.m.	6.43 p.m.	7.43 p.m.	8.40 p.m.	"	"
1708	8	57	壁 1° 28'	5 1	3.42 a.m.		5.4 a.m.		6.26 a.m.	"	"
1710	1	19	星 1° 46'	8 37	5.4 "		6.42 "		8.20 "	"	"
"	7	15	女 8° 27'	9 4	4.2 p.m.		5.46 p.m.		7.30 p.m.	"	"
"	12	13	柳 7° 56'	16 2	6.27 "	7.23 p.m.	8.22 "	9.21 p.m.	10.17 "	"	"
1711	6	10	牛 5° 39'	14 53	11.47 "	0.43 a.m.	1.42 a.m.	2.40 a.m.	3.36 a.m.	"	"
"	12	8	鬼 1° 25'	3 38	2.20 a.m.		3.32 "		4.44 "	"	"

A. D.				dig. m.							C	264
1713	3	30	尾 6° 20'	3 53	1.3 a.m.	10.36 p.m.	2.15 a.m.	3.26 a.m.				
1715	4	18	氏 15° 45'	6 59	6.43 p.m.		8.19 p.m.	9.55 p.m.				
1717	8	35	室 7° 53'	7 19	0.8 a.m.		1.45 a.m.	3.22 a.m.				
1718	2	31	翼 6° 0'	17 46	9.43 p.m.	10.36 p.m.	11.38 p.m.	1.34 "	0.40 a.m.			
"	8	29	危 17° 5'	17 55	1.36 a.m.	2.46 a.m.	3.41 a.m.	5.46 "	4.36 "			
1719	7	23	危 6° 12'	4 21	3.9 "		4.27 "	5.46 "				
1720	12	45	危 22° 8'	7 26	9.11 p.m.		10.51 p.m.	0.30 "				
1721	11	39	井 10° 37'	18 28	8.22 "	9.32 p.m.	10.27 "	0.32 "	11.22 p.m.			
1722	11	33	井 10° 42'	6 3	9.59 "		11.29 "	1.0 "				
1725	9	48	角 8° 14'	18 28	1.9 a.m.	2.12 a.m.	3.6 a.m.	5.2 "	4.0 a.m.			
1726	3	44	奎 7° 51'	6 32	7.25 p.m.		8.57 p.m.	10.29 p.m.				
1728	7	1	星 4° 8'	7 46	11.7 "	3.46 "	0.48 a.m.	1.29 a.m.				
1729	1	59	虛 5° 42'	16 24	2.42 a.m.		4.39 "	6.35 "	5.31 "			
1730	6	49	鬼 4° 4'	3 11	10.46 p.m.		11.49 p.m.	0.53 "				
1731	11	11	尾 9° 30'	5 22	6.15 "		7.40 "	9.5 p.m.				
1732	5	9	畢 13° 11'	15 33	7.53 "	9.0 p.m.	9.53 "	11.52 "	10.46 p.m.			
"	10	6	畢 5° 19'	17 54	3.54 a.m.	4.56 a.m.	5.49 a.m.	7.45 a.m.	6.43 a.m.			
1733	4	4	心 3° 16'	7 23	1.28 "		3.3 "	4.37 "				
"	10	60	昂 3° 43'	7 10	7.36 p.m.		9.6 p.m.	10.35 p.m.				
1735	3	22	軫 10° 13'	6 10	5.13 "		6.42 "	8.10 "				
1737	2	11	軫 6° 1'	5 24	10.44 "		11.59 "	1.13 a.m.				
1738	12	31	翼 2° 32'	5 52	5.28 a.m.		6.54 a.m.	(7.8 a.m. set eclipsed 5' 42")				
1739	6	27	斗 20° 43'	10 59	10.17 p.m.	11.31 p.m.	11.54 p.m.	0.17 a.m.	1.31 a.m.			

LUNAR ECLIPSES.

Year.	Month.	Day of cycle.	Longitude.	Portion eclipsed.	Beginning.	Total immersion.	Middle.	Emersion.	End.	Book.	Section.
A. D.				dig. m.							
1739	12	25	井 21° 28'	17 41	4.17 a.m.	5.22 a.m.	6.15 a.m.	7.8 a.m.		C	264
					(7.17 a.m. set eclipsed 8' 37")	(7.23 a.m. set eclipsed 5' 15")					
1740	11	9	井 10° 3'	5 19	6.10 "		10.56 p.m.		11.49 p.m.	"	"
1742	4	41	氏 16° 50'	2 1	10.1 p.m.		8.9 "		10.25 "	"	"
"	10	38	胃 6° 36'	5 44	6.53 "				1.21 a.m.	"	"
1743	4	35	氏 6° 1'	16 9	9.28 "	10.33 p.m.	11.24 "	0.16 a.m.	5.12 "	"	"
1744	3	30	亢 5° 58'	6 57	2.54 a.m.		4.23 a.m.		9.49 p.m.	"	"
"	9	27	奎 9° 42'	5 26	7.7 p.m.		8.28 p.m.		0.55 a.m.	"	"
1746	2	49	張 14° 51'	7 50	10.2 "		11.28 "		8.40 p.m.	"	"
1748	1	38	星 1° 21'	2 59	6.35 "		7.37 "		5.3 a.m.	"	"
1749	11	57	井 0° 28'	4 9	2.40 a.m.		3.51 a.m.			"	"
1750	5	55	箕 0° 33'	13 38	3.2 "	4.8 a.m.	(4.35 a.m. set eclipsed 13' 0")		6.52 a.m.	"	"
1751	10	46	畢 5° 23'	7 29	4.3 "		5.27 a.m.		3.37 "	"	"
1753	3	8	角 7° 31'	4 32	1.12 "		2.25 "		6.3 p.m.	"	"
"	9	5	奎 0° 21'	4 16	3.35 p.m.		4.49 p.m.			"	"
					(5.35 p.m. rose eclipsed 2' 39")						
1754	8	59	壁 2° 22'	17 23	3.53 p.m.		5.51 p.m.	6.44 p.m.	7.49 "	"	"
					(5.49 p.m. rose eclipsed 17' 23")						

A. D.			dig. m.	5.1 p.m. (6.4 p.m. rose eclipsed 5' 12")	6.24 p.m. 6.47 p.m. set eclipsed 5' 28"	7.48 p.m.	C	264
1755	8	室 6° 57'	5 37	5.1 p.m.	6.24 p.m.	7.48 p.m.	C	264
1758	6	斗 20° 50'	14 22	10.35 p.m.	0.19 a.m.	2.4 a.m.	"	"
"	12	井 20° 58'	5 28	2.26 "	3.48 p.m.	5.9 p.m.	"	"
1760	10	昂 5° 17'	5 29	3.33 a.m.	4.48 a.m.	6.3 a.m.	"	"
1761	4	氏 16° 18'	14 50	4.14 "	(4.49 a.m. set eclipsed 5' 28")	9.11 p.m.	"	"
"	10	胃 6° 42'	17 47	5.34 p.m.	6.47 p.m.	5.46 a.m.	"	"
1762	9	箕 8° 43'	5 52	2.59 a.m.	4.23 a.m.	10.58 p.m.	"	"
1765	2	張 14° 50'	17 12	7.17 p.m.	9.7 p.m.	1.37 a.m.	"	"
"	7	危 7° 19'	18 39	9.57 "	10.56 "	4.41 "	"	"
1766	1	張 3° 46'	3 19	2.28 a.m.	3.34 a.m.	0.45 "	"	"
1768	11	井 0° 22'	17 28	9.10 p.m.	10.57 p.m.	1.40 "	"	"
1771	9	奎 10° 54'	3 34	9.22 "	0.31 a.m.	1.41 "	"	"
1772	3	角 7° 29'	17 41	10.8 "	11.55 p.m.	3.3 "	"	"
"	9	壁 12° 56'	16 33	11.13 "	1.11 a.m.	3.17 "	"	"
1773	8	壁 1° 46'	6 33	0.19 a.m.	1.48 "	0.14 "	"	"
1775	1	星 2° 46'	5 19	9.29 p.m.	10.51 p.m.	0.6 "	"	"
"	12	柳 8° 16'	18 6	8.11 "	10.9 "	1.26 "	"	"
1776	12	鬼 1° 26'	5 39	10.41 "	0.4 a.m.	9.8 p.m.	"	"
1777	6	斗 20° 50'	0 57	7.57 "	8.32 p.m.	5.39 a.m.	"	"
1779	10	昂 5° 7'	17 31	2.1 a.m.	3.50 a.m.	8.32 p.m.	"	"
1780	4	氏 15° 55'	9 30	5.16 p.m.	6.54 p.m.		"	"
				(7.10 p.m. rose eclipsed 9' 7")				

LUNAR ECLIPSES.

Year.	Month.	Day of cycle.	Longitude.	Portion eclipsed.	Beginning.	Total immersion.	Middle.	Emersion.	End.	Book.	Section.
A. D.				dig. m.							
1782	8	16	室 8° 17'	3 16	9.5 p.m.		10.10 p.m.		11.16 p.m.	C	264
1783	2	15	翼 7° 37'	17 46	3.22 a.m.	4.23 a.m.	5.14 a.m.	6.5 a.m.	7.5 a.m.	"	"
					(6.2 a.m. set eclipsed 10' 24")						
"	8	11	危 17° 43'	17 38	5.9 a.m.	6.38 a.m.	7.29 a.m.	8.20 "	9.18 "	"	"
					(5.44 a.m. set eclipsed 0' 49")						
1784	7	5	危 7° 19'	6 40	9.17 p.m.		10.39 p.m.		0.0 a.m.	"	"
1785	12	27	井 22° 24'	4 5	7.27 "		8.37 "		9.48 p.m.	"	"

The preceding list of 925 solar and 574 lunar eclipses has been collected from various Chinese sources accessible to me, and represents I believe nearly all that can be gathered from the native literature.

In the first column, the year does not exactly coincide with the European year of the same date; but represents the Chinese year, which generally commences in our January or February; so that there is frequently a discrepancy of one or two months. For instance the eclipse which took place on February 3rd, 1711, is registered as the 12th month of 1710; and that of January 24th, 1712, is put in the table the 12th month of 1711. The advantage of this notation however, in a European point of view, amply compensates for the little apparent inconsistency; as, for example where we replace Kang-he 49, by A. D. 1710, or instead of Yung-ching 3 we write A. D. 1725. To have reduced the table altogether to Gregorian time, would have involved a number of curious chronological problems, and far exceeded the time I could give to it

In the second column "In." placed before some of the numbers, implies that they are intercalary months; thus "In 7" is the "Intercalary 7th month."

The third column gives the number of the day in the sexagenary cycle; illustrating a practice which has existed from unknown antiquity, and is an invaluable resource for identifying the date of any eclipse.

In former times the method of dividing the night was into five 更 *kang* "watches," from the end of evening twilight, to the beginning of morning twilight, and each watch into five 唱 *ch'ang*, also called 籌 *ch'ow*, and 點 *t'ien* respectively, at different periods.

From the commencement of the present dynasty, the longitude of the luminaries at the middle of the eclipse, is given in a fourth column. This is according to the 28 constellations of the Zodiac, the distance being noted from the nearest determinant star on the west. Thus, for the year 1785, where we have 井 *Tsing* $22^{\circ} 24'$, suppose the longitude of *Tsing* to be $92^{\circ} 30'$, the place of the eclipse will be Long. $114^{\circ} 54'$. The following are the names of the twenty-eight constellations, and the longitudes of their determinant stars for A. D. 1800, as given by Biot in his "Précis de l'Histoire de l'Astronomie Chinoise."

角 <i>K'è</i>	201°	3'	0"	奎 <i>K'wei</i>	17°	48'	12"
亢 <i>K'ang</i>	211	42	1	婁 <i>Leu</i>	31	10	39
氐 <i>Ti</i>	222	17	35	胃 <i>Wei</i>	44	8	47
房 <i>Fang</i>	240	8	48	昂 <i>Madu</i>	57	12	1
心 <i>Sin</i>	245	0	25	畢 <i>Peth</i>	65	39	58
尾 <i>Wei</i>	253	27	15	觜 <i>Tsuy</i>	80	54	47
箕 <i>Ki</i>	268	28	15	參 <i>Ts'an</i>	79	34	6
斗 <i>Ton</i>	277	23	6	井 <i>Tsing</i>	92	30	21
牛 <i>Nen</i>	301	15	11	鬼 <i>Kwei</i>	122	56	24
女 <i>Neu</i>	308	55	54	柳 <i>Lèu</i>	127	31	4
虛 <i>Heu</i>	320	36	16	星 <i>Sing</i>	144	29	44
危 <i>Wei</i>	330	33	45	張 <i>Chang</i>	153	54	37
室 <i>Shih</i>	350	41	59	翼 <i>Yih</i>	170	56	9
壁 <i>Peth</i>	6	22	9	轸 <i>Chin</i>	187	56	52

Anterior to the present dynasty it was customary to record the positions of the heavenly bodies by equatorial measurement, which I have marked Right Ascension, although it differs from the application of that term in European Astronomy, in giving the place in degrees instead of hours. I merely make this remark for the better understanding of the ancient theory; for the recorded observations of olden times are of too rude a character, to render it of any great importance whether we consider them as Longitude or Right Ascension.

The fifth column gives the extent of the eclipse in digits and minutes, the diameters of the sun and moon respectively, being divided into 10 digits.

The five following columns give the times of Beginning, Total Immersion, Middle, Reappearance of Light, and End of the Eclipse.

The two letters l. d. appended to many of the early eclipses, signify that they occurred on the last day of the calendar month.

The two last columns shew the native authority and the section or book from which the record is copied. Seven of the solar and fourteen of the lunar eclipses, of which I have failed to find a notice in any Chinese work within my reach, are given on the authority of Gaubil, who professes to have extracted them from Chinese authors,—as published in the 3rd volume of Souciet's "Observations Mathématiques, Astronomiques, Géographiques, Chronologiques, et Physiques." The following are the several works indicated by the letters.

- A 書經 *Shoo king*. Book of Government.
 B 詩經 *She king*. Book of Odes.
 C 春秋 *Ch'un ts'ew*. Spring and Autumn Annals.
 D 史記 *Shè kè*. Historical Record.
 E 前漢書 *Ts'een hán shoo*. Book of the Former Han.
 F 後漢書 *Hón hán shoo*. Book of the After Han.
 G 三國志 *San kwó ché*. Memoirs of the three Kingdoms.
 H 晉書 *Tsin shoo*. Book of Tsin.
 I 宋書 *Sung shoo*. Book of Sung.
 J 陳書 *Ch'in shoo*. Book of Chin.
 K 魏書 *Wei shoo*. Book of Wei.
 L 北齊書 *Pih tse shoo*. Book of the Northern Tse.
 M 周書 *Chow shoo*. Book of Chow.
 N 隋書 *Suy shoo*. Book of Suy.
 O 南史 *Nán shè*. Southern History.
 P 北史 *Pih shé*. Northern History.
 Q 新唐書 *Sin t'ang shoo*. New book of Tang.
 R 舊五代史 *K'ew wò táí shè*. Old history of the Five Dynasties.
 S 遼史 *Leaou shè*. Leaou History.
 T 金史 *Kin shè*. Kin History.
 U 元史 *Yuen shè*. Yuen History.
 V 明史 *Ming shè*. Ming History.
 W 說苑 *Shwó yuén*. Flowers of Conversation.
 X 古今注 *Kò kìn choó*. Remarks on subjects, old and new.
 Y 通志 *T'ung ché*. National archives.
 Z 唐會要 *T'ang huiy yaou*. Notabilia of the Tang Dynasty.
 & 通鑑綱目 *Tung k'ien kang mǔh*. Mirror of History.
 A 文獻通考 *Wán h'ien t'ung k'áu*. Antiquarian researches.
 B 續文獻通考 *Sūh nán h'ien t'ung k'áu*. Supplement to Antiquarian researches.
 C 皇朝文獻通考 *Hwáng ch'aow nán h'ien t'ung k'áu*. Antiquarian researches of the present Dynasty.
 D 宏簡錄 *Hung k'ien lǔh*. History of the Middle ages.
 E 續宏簡錄 *Sūh hung k'ien lǔh*. Supplement to the History of the Middle ages.

F 鳳洲綱鑑全編 *Fung chow kang kên tseuên pên*. Fung-chow's Mirror of History.

G 明紀芳華 *Ming kè fang moo*. Outline history of the Ming.

H 吾學編 *Wô hëö pên*. History of the early Ming.

The Sung and Kin, who ruled contemporaneously, had their respective capitals at Hang-chow and Peking, and have each left a record of Astronomical observations. These must necessarily in great part refer to the same objects; and it is worthy of remark how frequently the Hang-chow astronomers allude to the cloudy state of the atmosphere, as cutting off their view of the eclipses, while their contemporaries in the north register the same phenomena, without allusion to any cloudy interruptions in the clear atmosphere of Peking.

A good many of the eclipses are recorded as calculations, with a note appended to the effect that they were not seen by the official observers. Some of these were afterwards calculated by Schall, the President of the Astronomical Board at the commencement of the present dynasty, who found that eclipses actually took place about the times predicted. The difficulty of observing very small eclipses with such instruments only as the Chinese possessed, can be readily appreciated by practical observers. Schall attributes negligence to the observers, which may be true; but it is not improbable that motives of state policy might sometimes be an inducement to ignore an eclipse. There are probably a good many errors in marking the months; which is not surprising, when we consider how many ages the records must have been handed down by manuscript transfers, before the art of printing was introduced.

Altogether we have here a catalogue of eclipses of obvious utility to the historian, and probably not without their value to the man of science; and although the number of errors is naturally very considerable, yet there are so many counter-checks, that at the expense of a little time and care almost any of them may be rectified.



ARTICLE VIII.

CHINESE CHRONOLOGICAL TABLES.

By WM. FREDK. MAYERS, Esq.

IN the historical tables appended below the simple aim of the compiler has been to present in an accessible form, favourable to easy reference, a view of the successive Chinese dynasties and their individual reigns, such as is likely to prove useful in historical researches. The practice in Chinese literature of defining the dates of historical events either by reference to the corresponding year of an Emperor's reign or by quoting the cyclical character appertaining to the particular year, renders the possession of such tables an absolute necessity; and the present is by no means the first time that a record of the kind has been projected. The earliest Chinese historical tables published in English are comprised in Morrison's "*View of China*," where, however, the arrangement is both faulty and defective. In Gutzlaff's "*History of China*" a more complete system is followed, though here also precision in dates is wanting; and in 1842 one of the writers in the "*Chinese Repository*" prepared a table of the sovereigns distinguished by their posthumous titles alone; but in none of these compilations are all the requirements of Chinese Chronology satisfactorily met. For the purpose of supplying a complete Chronological index, several distinct conditions must needs be fulfilled. It is scarcely necessary to point out that the Emperors of China themselves are known in history by the posthumous title¹ conferred upon them after death, but that their reigns are designated by appellations² chosen according to their own fancy whilst on the Throne, and frequently changed during the period of their sway.³ What is required, therefore, is a table which shall fix not only the date of accession

1. 廟號, *Miao Hao*, lit. Temple-title, i.e. the title under which the sovereign is canonized (*shih 諡*) in the ancestral Temple.

2. 年號, *Nien Hao*, lit. Annual-title, or epochal designation.

3. This was more particularly the case with the earlier dynasties. The present dynasty has not employed more than one title for each reign.

of the Emperor known by his canonical title, but also of the commencement of each period of his reign as distinguished by its special appellation. The fulfilment of this object is attempted in the annexed tables,⁴ which have been compiled from original sources.

Still, however, something remains to be elucidated. The Chinese employ an independent method of specifying a precise period of time, viz: by means of the Cycle of sixty years,⁵ of which no comparative table has hitherto (so far as the present writer's knowledge serves him) been constructed. The attempt is now made, and its result is presented herewith, as a necessary introduction to the historical tables. The two combined will be found, the writer hopes, a complete index to Chinese Chronology.

A brief inquiry into the nature of the titles applied to Chinese sovereigns must next be added. As regards the designations by which history recognizes the successive sovereigns of the mythological dynasties, no satisfactory explanation can be arrived at, and it does not appear worth while to occupy space and time in retailing here the theories advanced by various Chinese writers on this subject. As regards the line of doubtful sovereigns antecedent to the Hia dynasty, the name of the individual is by some authors declared to be that of his birth-place, and *vice versa*; whilst in many of the titles of the sovereigns of Shang an obvious but yet unexplainable connection exists between the sovereign's appellation and the characters of the cyclical period.

4. As an example of their intended application, it may be assumed that in the course of Chinese reading a reference is met with entailing the verification of the "3rd year of Wu Ti of the Tsin dynasty." On turning to the page of the Tables comprising the Tsin dynasty, A. D. 265 is found to be the first year of Wu Ti's reign, and it becomes obvious that the 3rd year corresponds to A. D. 267. If, however, in lieu of referring to this sovereign by his *miao hao* or posthumous title the Chinese historian has spoken of the "3rd year of T'ai Shih of the Tsin dynasty," it will be found on consulting the Tables that T'ai Shih was the first of three successive *nien hao* or epochal designations adopted during the course of Wu Ti's reign, and that the year 267 is still indicated.

5. The invention of the Cycle, commonly called *Hwa Kia Tze*, 花甲子, or List of the Kia Tze characters, is a subject upon which great uncertainty prevails, but which has been ably discussed by the Rev. J. Chalmers in his chapter on the astronomy of the Chinese in Legge's *Shoo King*, Prolegomena, p. 90. The use of the Kia tze characters for the designation of months is undoubtedly of very high antiquity, but it was not until about the commencement of our present era that the cyclical table was brought into use for the

In the succeeding dynasty of Chow, with which history begins to dawn, we find the sovereigns designated by a series of honorific titles such as "the Martial King," "the Glorious King," &c., corresponding to the *miao hao* of later times, of which, indeed, they are the declared origin. The earlier examples among them, however, must be considered as probably the invention of later times, notwithstanding the fact that Chow Kung, the great counsellor of the founder of the Chow dynasty, B. C. 1122, is the reputed author of the practice of canonization.⁶

purpose of distinguishing *years*. Later historians, however, have not hesitated to carry back not only the chronological series of cycles to the earliest ages, but also to attribute its invention to the mythical Emperor Hwang Ti. The reign of this sovereign is stated to have commenced B. C. 2697, and the invention of the cycle is credited to the 8th year of his reign, his sixty-first year, or B. C. 2637, being usually considered the commencement of the first of the cycles, though with some writers the cycle is made to commence with the first year of Hwang Ti's reign, thus adding one to the total number of cyclical periods recognized by the adverse party. The system most commonly followed is that in which the cycles are made to commence with the 61st year of Hwang Ti, and the present tables are drawn up in conformity with it. The short columns at the head of the tables contain the date of commencement of each cycle, in rotation, followed below by the years in successive order. Thus, for instance, *hia tze* was the combination denoting the years A. D. 4, 304, 604, &c., down to 1804, and the following combination, *yi ch'ow*, corresponds to A. D. 5, 305, 605, &c., down to 1805. In the next column a second period is commenced, comprising all the cycles beginning with the years shown in the index-column at the top, E. G. (still to use the date already referred to in note 4 for the purpose of exemplification) we desire to ascertain the date according to our era of an event occurring "in the year *ting hai* 丁亥 of Wu Ti of the Tsin Dynasty," we find on consulting the historical tables that Wu Ti's reign commenced A. D. 265, and turning to the table of cycles, it is found that a cyclical period commenced in A. D. 244 and must therefore have embraced within its course the reign of Wu Ti. Fixing A. D. 265, the first of his reign, as the year *yi yet* 乙酉 of the cycle, we follow the column of characters down until we reach *ting hai*, and at once identify this combination, on reference to the column of years, as A. D. 267.

6. In the 史記 *Shih Ki* or Historical Records by Sz-ma Ts'ien, B. C. 104, under the heading 諡法 *Shih Fa*, the institution of posthumous titles is attributed to Chow Kung. The character *Shih* is explained in the *Shwo Wên* dictionary (A. D. 200) as 行之迹也 "the vestiges of action." Commentators have further declared that 諡者, the conferring of titles after death, is the means "by which virtue is exalted and vice receives its meed of blame."

In the year B. C. 221 the ambitious Chêng Wang of Ts'in, who extended the rule of a petty principality of the West over the territories formerly divided among the feudatory States constituting the Empire of Chow, declared himself the supreme ruler of the Chinese; and as founder of a dynasty which he trusted would endure for ever assumed for the first time the designation *Hwang Ti* 皇帝, sovereign ruler or *Emperor*, combining in this term the titles ascribed to the three *Hwang* and five *Ti* recognized by tradition as the earliest sovereigns. One of his first decrees, as recorded in history, ordained the abolition of the use of posthumous titles, declaring it his pleasure that he should be known simply as Shih Hwang Ti 始皇帝, the "First Emperor," and that all successive generations should be distinguished numerically as 二世, 三世, 至于萬世, "the second generation, the third generation, and thus onward to the ten thousandth." Alas for human ambition! The mighty innovator's line was barely suffered to fulfil the commencement of its second reign when its career was brought to a violent end, and the dynasty of Han was founded on its ruins. With the commencement of this dynasty we begin to tread on firm historical ground; and with the consolidation of the Empire new customs and ordinances are found to have been instituted, the rudiments of most of those existing at the present day. The early sovereigns of this house restored the practice of conferring posthumous titles. Its founder, on declaring himself Emperor, B. C. 202, assumed the title of Kao Hwang Ti 高皇帝, "the Exalted Emperor," under which title his memory was venerated in the ancestral temple established B. C. 194 by his son and successor Hwei Ti. It was not, however, until the reign of King Ti, B. C. 156, that the posthumous titles for the preceding sovereigns were formally determined. The first recorded action of King Ti is set forth in history as follows: "In the 10th month of the first year of his reign he canonized the Exalted Emperor by the title *T'ai Tsu* 太祖, [Grand Forefather], and the Emperor *Hiao Wu* by the title *T'ai Tsung* 太宗, [Grand Ancestor]."⁷ Since this period the rule of canonization has been uninterruptedly followed, with but slight modifications in the style of nomen-

7. The weak boy-ruler Hwei Ti and his usurping mother, the consort of Kao Ti, were omitted from canonization, as unworthy of a place in the ancestral line.

clature through all changes of dynasty; and its honours have as a rule been extended by the founder of each new line to the last sovereign of the dynasty he supplanted.

To come now to the customs of designating each reign by a peculiar title, we find the first institution of this practice to have originated with a decree by the Emperor Wên Ti, who ordained in B. C. 164⁸ that the 17th year of his reign should be considered the first of a new period. As yet, however, no special titles were invented to designate such portions of the reign, not was it until the reign of Wu Ti, B. C. 140, that this system became finally perfected. From that date until the present day the series of epochal designations has been unbroken.⁹

The scope of the present compilation being purely mechanical, it would be foreign to its purpose to enter upon an investigation of the credibility of the early Chinese annals, which, however, it

8. The *T'ung Kien Kang Mu* records this event as follows: 詔更以明年爲元年 "he decreed that the next year, [the 17th of his reign] should be entitled *Yüan Nien* the First Year. From time immemorial, the first year of each reign had been distinguished by the term 元, which combines the meanings "highest" and "first"; and Wên Ti, moved by the flattery of designing counsellors, was induced to arrogate this title to more than one year of his reign, which thus became divided into two portions."

9. The existing fragments of a work entitled 文館詞林, a collection of ancient documents originally forming 1,000 *K'üan*, which was compiled A.D. 658 by an official of the T'ang dynasty, comprise a decree by Ngai Ti of the Han dynasty, (B. C. 5), which exhibits the course pursued in ordaining a change of *Nien Hao*. The Decree is as follows:

—"The fortunes of Han have endured for two hundred years. Their foundation was willed by destiny. Imperial Heaven hath sent down its protection to the foolish, and a renewal of the talisman of Empire hath been granted to the State of Han. Unrighteous as we know ourselves to be, how shall We venture to ignore the high command by which Our Throne exists? It behoves us that we aim at reformation in common with all Our subjects. Let there be a Great Pardon throughout Our Empire. Let also the second year of the period *Kien P'ing* be styled the first year of the era *T'ai Ch'u Yüan Tsiang* [i.e. Grand Commencement, Great Beginning]."

The change decreed above is not recorded in history as an accomplished fact. We read in the *T'ung Kien Kang Mu* as follows, under date of the 6th month of the 2nd year of *Kien P'ing*: "A general pardon declared. The *nien-hao* changed to *T'ai Ch'u* 太初. The Emperor's designation changed to *Ch'ên Shêng Liu T'ai P'ing Hwang Ti*." Almost immediately ensuing we find a farther record: "In the eighth month a decree was issued abrogating the change of *nien-hao* and title."

may be added, the writer believes altogether incapable of standing the test of criticism. Dr. Legge has gone far on the path of destruction as regards the myths concerning Yao and Shun, the Great Yü, and their successors, which are tranquilly received as genuine history by the Chinese, but the sphere of incredulity may, in the writer's opinion, be extended to the ages immediately preceding the era of Confucius. He trusts on a future occasion to justify this expression of lack of confidence in the Chinese historical records.

* * It will be observed that in all the early reigns, from Fu Hi down to the founder of the Han dynasty, a difference of one year exists between the dates given in the following tables and those found in other lists, and notably in the "Table of Ancient Chinese Chronology" contained at p. p. 185 *et seq.* of the prolegomena to Dr. Legge's translation of the Shoo King. Owing to Dr. Legge's absence from China, the writer has been unable to fulfil his wish to consult the learned translator as to the cause of this difference, which he can only account for to himself by the surmise that for astronomical purposes Dr. Legge may have reduced the calculations of the cycle to a different standard from that usually followed. This is not, however, stated in his work, and the writer confesses his failure to discover the principle upon which the year 甲辰, the first of the reign of Yao, calculated as B. C. 2357 in the accompanying tables, has been placed by Dr. Legge as B. C. 2356.

COMPARATIVE TABLE OF THE CHINESE CYCLES ANTERIOR TO THE CHRISTIAN ERA

[Cycles 1 to 44, or B. C. 2637 to A. D. 3].

CYCICAL CHARACTER.	CYCLE COMMENCING.					CYCICAL CHARACTER.	CYCLE COMMENCING.				
	B. C.	B. C.	B. C.	B. C.	B. C.		B. C.	B. C.	B. C.	B. C.	B. C.
甲 <i>kia-tze.</i>	57	117	177	237	297	甲 <i>kia-ua.</i>	27	87	147	207	2637
乙 <i>yih-ch'ow.</i>	357	417	477	537	597	乙 <i>yi-uei.</i>	26	86	46	6	66
丙 <i>ping-yin.</i>	657	717	777	837	897	丙 <i>ping-shên.</i>	25	85	45	5	65
丁 <i>ting-mao.</i>	957	1017	1077	1137	1197	丁 <i>ting-yao.</i>	24	84	44	4	64
戊 <i>wa-shên.</i>	1257	1317	1377	1437	1497	戊 <i>wa-sû.</i>	23	83	43	3	63
己 <i>ki-sze.</i>	1557	1617	1677	1737	1797	己 <i>ki-hai.</i>	22	82	42	2	62
庚 <i>keng-ou.</i>	1857	1917	1977	2037	2097	庚 <i>keng-tze.</i>	21	81	41	1	61
辛 <i>sin-uei.</i>	2157	2217	2277	2337	2397	辛 <i>sin-ch'ow.</i>	20	80	40	00	60
壬 <i>jên-yin.</i>	2457	2517	2577	2637	2697	壬 <i>jên-yin.</i>	19	79	39	99	59
癸 <i>kwet-yao.</i>						癸 <i>kwet-mao.</i>	18	78	38	98	58
甲 <i>kia-sû.</i>	47	6	66	126	186	甲 <i>kia-shên.</i>	17	77	37	97	57
乙 <i>yih-hai.</i>	46	5	65	125	185	乙 <i>yih-aze.</i>	16	76	36	96	56
丙 <i>ping-tze.</i>	44	4	64	124	184	丙 <i>ping-uei.</i>	15	75	35	95	55
丁 <i>ting-ch'ow.</i>	43	3	63	123	183	丁 <i>ting-uei.</i>	14	74	34	94	54
戊 <i>wa-shên.</i>	42	2	62	122	182	戊 <i>wa-shên.</i>	13	73	33	93	53
己 <i>ki-mao.</i>	41	1	61	121	181	己 <i>ki-yao.</i>	12	72	32	92	52
庚 <i>keng-shên.</i>	40	00	60	120	180	庚 <i>keng-sû.</i>	11	71	31	91	51
辛 <i>sin-ze.</i>	39	99	59	119	179	辛 <i>sin-lai.</i>	10	70	30	90	50
壬 <i>jên-uei.</i>	38	98	58	118	178	壬 <i>jên-tze.</i>	9	69	29	89	49
癸 <i>kwet-uei.</i>	37	97	57	117	177	癸 <i>kwet-ch'ow.</i>	8	68	28	88	48
甲 <i>kia-shên.</i>	36	96	56	116	176	甲 <i>kia-yin.</i>	7	67	27	87	47
乙 <i>yih-yao.</i>	35	95	55	115	175	乙 <i>yih-mao.</i>	6	66	26	86	46
丙 <i>ping-hai.</i>	34	94	54	114	174	丙 <i>ping-shên.</i>	5	65	25	85	45
丁 <i>ting-tze.</i>	33	93	53	113	173	丁 <i>ting-sze.</i>	4	64	24	84	44
戊 <i>wa-tze.</i>	32	92	52	112	172	戊 <i>wa-ua.</i>	3	63	23	83	43
己 <i>ki-ow.</i>	31	91	51	111	171	己 <i>ki-uei.</i>	2	62	22	82	42
庚 <i>keng-yin.</i>	30	90	50	110	170	庚 <i>keng-shên.</i>	1	61	21	81	41
辛 <i>sin-mao.</i>	29	89	49	109	169	辛 <i>sin-yao.</i>	*00	60	20	80	40
壬 <i>jên-shên.</i>	28	88	48	108	168	壬 <i>jên-yao.</i>	*99	59	19	79	39
癸 <i>kwet-sze.</i>						癸 <i>kwet-hai.</i>	*98	58	18	78	38

* In last Cycle for 00, 99, 98, read A. D. 1, 2, 3.

COMPARATIVE TABLE OF THE CHINESE CYCLES POSTERIOR TO THE CHRISTIAN ERA
 [Cycles 45 to 76, or A. D. 4 to 1923].

CYCICAL CHARACTER.	CYCLE COMMENCING.					CYCICAL CHARACTER.	CYCLE COMMENCING.					CYCLE COMMENCING.				
	A. D. 4	A. D. 64	A. D. 304	A. D. 604	A. D. 904		A. D. 4	A. D. 64	A. D. 304	A. D. 604	A. D. 904	A. D. 4	A. D. 64	A. D. 304	A. D. 604	A. D. 904
甲子 <i>kiu-tze.</i>	04	64	304	604	904	甲子 <i>kiu-tze.</i>	34	94	304	604	904	34	94	304	604	904
乙丑 <i>yih-ch'ou.</i>	05	65	305	605	905	乙未 <i>yih-wei.</i>	35	95	305	605	905	35	95	305	605	905
丙寅 <i>ping-yin.</i>	06	66	306	606	906	丙申 <i>ping-shen.</i>	36	96	306	606	906	36	96	306	606	906
丁卯 <i>ting-mao.</i>	07	67	307	607	907	丁酉 <i>ting-yew.</i>	37	97	307	607	907	37	97	307	607	907
戊辰 <i>wu-shen.</i>	08	68	308	608	908	戊戌 <i>wu-sze.</i>	38	98	308	608	908	38	98	308	608	908
己巳 <i>ki-sze.</i>	09	69	309	609	909	己亥 <i>ki-hai.</i>	39	99	309	609	909	39	99	309	609	909
庚午 <i>keng-wu.</i>	10	70	310	610	910	庚子 <i>keng-tze.</i>	40	00	310	610	910	40	00	310	610	910
辛未 <i>sin-wei.</i>	11	71	311	611	911	辛丑 <i>sin-ch'ou.</i>	41	01	311	611	911	41	01	311	611	911
壬申 <i>jin-shen.</i>	12	72	312	612	912	壬寅 <i>jin-yin.</i>	42	02	312	612	912	42	02	312	612	912
癸酉 <i>kuei-yew.</i>	13	73	313	613	913	癸卯 <i>kuei-mao.</i>	43	03	313	613	913	43	03	313	613	913
甲戌 <i>kiu-sze.</i>	14	74	314	614	914	甲辰 <i>kiu-shen.</i>	44	04	314	614	914	44	04	314	614	914
乙亥 <i>yih-hai.</i>	15	75	315	615	915	乙巳 <i>yih-sze.</i>	45	05	315	615	915	45	05	315	615	915
丙子 <i>ping-tze.</i>	16	76	316	616	916	丙午 <i>ping-wu.</i>	46	06	316	616	916	46	06	316	616	916
丁丑 <i>ting-ch'ou.</i>	17	77	317	617	917	丁未 <i>ting-wei.</i>	47	07	317	617	917	47	07	317	617	917
戊寅 <i>wu-yin.</i>	18	78	318	618	918	戊申 <i>wu-shen.</i>	48	08	318	618	918	48	08	318	618	918
己卯 <i>ki-mao.</i>	19	79	319	619	919	己酉 <i>ki-yew.</i>	49	09	319	619	919	49	09	319	619	919
庚辰 <i>keng-shen.</i>	20	80	320	620	920	庚戌 <i>keng-sze.</i>	50	10	320	620	920	50	10	320	620	920
辛巳 <i>sin-sze.</i>	21	81	321	621	921	辛亥 <i>sin-hai.</i>	51	11	321	621	921	51	11	321	621	921
壬午 <i>jin-wu.</i>	22	82	322	622	922	壬子 <i>jin-tze.</i>	52	12	322	622	922	52	12	322	622	922
癸未 <i>kuei-wei.</i>	23	83	323	623	923	癸丑 <i>kuei-ch'ou.</i>	53	13	323	623	923	53	13	323	623	923
甲申 <i>kiu-shen.</i>	24	84	324	624	924	甲寅 <i>kiu-yin.</i>	54	14	324	624	924	54	14	324	624	924
乙酉 <i>yih-yew.</i>	25	85	325	625	925	乙卯 <i>yih-tze.</i>	55	15	325	625	925	55	15	325	625	925
丙戌 <i>ping-sze.</i>	26	86	326	626	926	丙辰 <i>ping-shen.</i>	56	16	326	626	926	56	16	326	626	926
丁亥 <i>ting-hai.</i>	27	87	327	627	927	丁巳 <i>ting-sze.</i>	57	17	327	627	927	57	17	327	627	927
戊子 <i>wu-tze.</i>	28	88	328	628	928	戊午 <i>wu-wu.</i>	58	18	328	628	928	58	18	328	628	928
己丑 <i>ki-ch'ou.</i>	29	89	329	629	929	己未 <i>ki-wei.</i>	59	19	329	629	929	59	19	329	629	929
庚寅 <i>keng-yin.</i>	30	90	330	630	930	庚申 <i>keng-shen.</i>	60	20	330	630	930	60	20	330	630	930
辛卯 <i>sin-mao.</i>	31	91	331	631	931	辛酉 <i>sin-yew.</i>	61	21	331	631	931	61	21	331	631	931
壬辰 <i>jin-shen.</i>	32	92	332	632	932	壬戌 <i>jin-sze.</i>	62	22	332	632	932	62	22	332	632	932
癸巳 <i>kuei-sze.</i>	33	93	333	633	933	癸亥 <i>kuei-hai.</i>	63	23	333	633	933	63	23	333	633	933

Appendix B.

CHRONOLOGICAL TABLES OF CHINESE DYNASTIES.

Dynastic Title.	Year of accession.	
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FABULOUS PERIOD.

三皇紀 Age of the 3 Sovereigns or *San Hwang*.

盤古	P'an Ku	} Fabulous periods comprising many thousands of years are assigned to these personages.	} These 3, entitled the celestial sovereign, the terrestrial sovereign, & the human sovereign, are commonly called the Three Sovereigns.
天皇	T'ien Hwang		
地皇	Ti Hwang		
人皇	Jên Hwang		
有巢氏	Yew Ch'ao		
燧人	Sui Jên		

五帝紀 Age of the 5 Rulers or *Wu Ti*.

		B. C.	Dynastic title.	appellation,
伏羲氏	} These are by some historians considered as the Five Rulers.	2852	T'ai Hao,	Tu Hi.
神農氏		2737	Yen Ti,	Shên Nung.
有熊氏		2697	Hwang Ti,	Yew Hiung and Hien Yüan.
又稱軒轅氏		2597	Shao Hao,	Kin T'ien.
金天氏		2513	Chwan Hü,	Kao Yang.
高陽氏	} Others exclude the last two, in favour of Yao and Shun.	2435	Kuh,	Kau Sin.
高辛氏		2365	Ti Chih.	
陶唐氏		2357	Yao,	T'ao T'ang.
有虞氏		2255	Shun,	Yew Yü.

LEGENDARY PERIOD.

夏紀 The Hia Dynasty.

禹	The Great Yü	2205
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Dynastic Title.		Year of accession.	
		B. C.	
啟	K'i	2197	
太康	T'ai K'ang	2188	
仲康	Chung K'ang	2159	
相	Siang	2146	
少康	Shao K'ang	2079	
杼	Ch'u	2057	
槐	Hwai	2040	
芒	Mang	2014	
泄	Sieh	1996	
不降	Pu Kiang	1980	
扃	Kiung	1921	
廑	Kin	1900	
孔甲	K'ung Kia	1879	
皐	Kao	1848	
發	Fa	1837	
桀	Kieh Kwei	1818	

商紀 [卽殷紀] The Shang Dynasty.

also called the Yin Dynasty.

成湯	T'ang	1766	{ Called Ch'êng T'ang, or T'ang the Completer.
太甲	T'ai Kia	1753	
沃丁	Yu Ting	1720	
太庚	T'ai Kêng	1691	
小甲	Siao Kia	1666	
雍己	Yung Ki	1649	
太戊	T'ai Mow	1637	
仲丁	Chung Ting	1562	
外壬	Wai Jên	1549	
河	Ho T'an Kia	1534	
祖甲	Tsu Yi	1525	
乙辛	Tsu Sin	1506	

Dynastic Title.		Year of accession.	
		B. C.	
沃甲	Yü Kia	1490	
祖丁	Tsu Ting	1465	
南庚	Nan Kêng	1433	
陽甲	Yang Kia	1408	
盤庚	P'an Kêng	1401	{ Changed the Dynastic title from Shang to Yin.
小辛	Siao Sin	1373	
小乙	Siao Yi	1352	
武丁	Wu Ting	1324	
祖庚	Tsu Kêng	1265	
祖甲	Tsu Kia	1258	
廩辛	Lin Sin	1225	
庚丁	Kêng Ting	1219	
武丁	Wu Yi	1198	
太丁	T'ai Ting	1194	
帝乙	Ti Yi	1196*	
紂辛	Show Sin	1154	

SEMI HISTORICAL AND HISTORICAL PERIOD.

周紀 The Chow Dynasty.

武王	Wu	1122
成王	Ch'êng	1115
康王	K'ang	1078
昭王	Chao	1052
穆王	Mu	1001
共王	Kung	946
懿王	Yi	934
孝王	Hiao	909
夷王	Yi	894
厲王	Li	878
宣王	Süan	827

* Sic in manuscript, probably intended for 1191. *Ed.*

Dynastic Title. .		Year of accession.	
		B. C.	
幽王	Yew	781	} Historical Period commences.
平王	P'ing	770	
桓王	Hwan	717	
莊王	Chwang	696	
僖王	Hi	681	
惠王	Hwei	676	
襄王	Siang	651	
頃王	K'ing	618	
匡王	K'wang	612	
定王	Ting	606	
簡王	Kien	585	
靈王	Ling	571	
景王	King	544	
敬王	King	519	
元王	Yüan	475	
貞定王	Chêng Ting	468	
考王	K'ao	440	
威烈王	Wei Lieh	425	
安王	Ngan	401	
烈王	Lieh	375	
顯王	Hien	368	
慎觀王	Shên Tsing	320	
赧王	Nan	314	
東周君	Tung Chow Kiün	255	

秦紀 The Ts'in Dynasty.

莊襄王 Chwang Siang Wong | 249 |

後秦紀 The Posterior Ts'in Dynasty.

王政	Wang Chêng	246
始皇帝	Shih Hwang Ti *	246
二世皇帝	Urh Shih Hwang Ti	209

* The reputed son of Chwang Siang Wang of Ts'in succeeded the latter in B.C. 246, and in B.C. 221 proclaimed himself universal Emperor. The year B.C. 221 is entitled the 26th year of his reign.

Dynastic Title or Miao Hao 廟號	Date of accession.	Title of Reign or Nien Hao 年號	Date of adoption of Nien Hao.
	B. C.		

漢紀 The Han Dynasty.

高帝	Kao Ti, or }	202	{ Claimed the Empire from	
高祖	Kao Tsu }		{ B. C. 206.	
惠帝	Hwei Ti	194		
高后	^{Kao} ^{Lü} ^{How} 呂氏 Shih	188		
文帝	Wên Ti	179	元年	Yüan Nien 179
			後元	How Yüan 163
景帝	King Ti	156	元年	Yüan Nien 156
			中元	Chung Yüan 149
			後元	How Yüan 143
武帝	Wu Ti	140	建元	Kien Yüan 140
			元光	Yüan Kwang 134
			元朔	Yüan So 128
			元狩	Yüan Show 122
			元鼎	Yüan T'ing 116
			元封	Yüan Fêng 110
			太初	T'ai Ch'u 104
			天漢	T'ien Han 100
			太始	T'ai Shih 96
			征和	Chêng Ho 92
			後元	How Yüan 88
昭帝	Chao Ti	86	始元	Shih Yüan 86
			元鳳	Yüan Fêng 80
			元平	Yüan P'ing 74
宣帝	Suan Ti	73	本始	Pên Shih 73
			地節	Ti Tsieh 69
			元康	Yüan K'ang 65
			神爵	Shên Tsio 61
			五鳳	Wu Fêng 57
			甘露	Kan Lu 53

Dynastic Title or Miao Hao 廟號	Date of accession.	Title of Reign or Nien Hao 年號	Date of adoption of Nien Hao.
Süan Ti [continued] 元帝 Yüan Ti	B. C. 48	黃龍 Hwang Lung 初元 Ch'u Yüan 永光 Yung Kwang 建昭 Kien Chao 竟寧 King Ning	B. C. 49 48 43 38 33
成帝 Ch'êng Ti	32	建始 Kien Shih 河平 Ho P'ing 陽朔 Yang So 鴻嘉 Hung Kia 永始 Yung Shih 元延 Yüan Yen 綏和 Sui Ho	32 28 24 20 16 12 8
哀帝 Ngai Ti	6	建平 Kien P'ing 元壽 Yüan Show	6 2
平帝 P'ing Ti*	A. D. 1	元始 Yüan Shih	A. D. 1
孺子嬰 Ju Tz' Ying	6	居攝 K'ü Shê	6
偽新王莽 Wang Mang Styled Sin, [usurper]	9	初始 Ch'u Shih 始建國 Shih Kien Kwo	8 9
淮陽王 Hwai Yang Wang 帝立 Ti Hiüan	23	天鳳 T'ien Fêng 地皇 Ti Hwang 更始 Kêng Shih	14 20 23

東漢紀 The Eastern Han Dynasty.

光武帝 Kwang Wu Ti	25	建武 Kien Wu	25
明帝 Ming Ti	58	中元 Chung Yüan	56
章帝 Chang Ti	76	永平 Yung P'ing	58
		建初 Kien Ch'u	76
		元和 Yüan Ho	84
		章和 Chang Ho	87

Dynastic Title or Miao Hao 廟號	Date of accession.	Title of Reign or Nien Hao 年號	Date of adoption of Nien Hao.
	A. D.		A. D.
和 帝 Ho Ti	89	永元 Yung Yüan	89
		元興 Yüan Hing	105
殤 帝 Shang Ti	106	延平 Yen P'ing	106
		永初 Yung Ch'u	107
安 帝 Ngan Ti	107	元初 Yüan Ch'u	114
		永寧 Yung Ning	120
順 帝 Shun Ti	126	建光 Kien Kwang	121
		延光 Yen Kwang	122
		建永 Kien Yung	126
		陽嘉 Yang Kia	132
		永和 Yung Ho	136
		漢安 Han Ngan	142
		建康 Kien K'ang	144
		永嘉 Yung Kia	145
		本初 Pên Ch'u	146
		建和 Kien Ho	147
冲 帝 Ch'ung Ti	145	和平 Ho P'ing	150
		元嘉 Yüan Kia	151
		永興 Yung Hing	153
質 帝 Chih Ti	146	永壽 Yung Show	155
		延熹 Yen Hi	158
		永康 Yung K'ang	167
桓 帝 Hwan Ti	147	建寧 Kien Ning	168
		熹平 Hi P'ing	172
		光和中 Kwang Ho	178
		中平 Chung P'ing	184
靈 帝 Ling Ti	168	初平 Ch'u P'ing	190
		興平 Hing P'ing	194
		建安 Kien Ngan	196
		延康 Yen K'ang	220
獻 帝 Hien Ti	190		

Dynastic Title or Miao Hao 廟號	Date of accession.	Title of Reign or Nien Hao 年號	Date of adoption of Nien Hao.
	A. D.		A. D.

EPOCH OF THE THREE KINGDOMS.

後漢紀 The Posterior Han Dynasty.

昭烈帝 Chao Lieh Ti	221	章武 Chang Wu	221
後帝 How Ti	223	建興 Kien Hing	223
		延熙 Yen Hi	238
		景耀 King Yao	258
		炎熙 Yen Hi	263

魏紀 The Wei Dynasty.

明帝 Ming Ti	227	太和 T'ai Ho	227
		青龍 Ts'ing Lung	233
		景初 King Ch'u	237
廢帝 Fei Ti	240	正始 Chêng Shih	240
		嘉平 Kia P'ing	249
少帝 Shao Ti	254	正元 Chêng Yüan	254
		甘露 Kan Lu	256
宋帝 Sung Ti	260	景元 King Yüan	260
		咸熙 Hien Hi	264

吳紀 The Wu Dynasty.

天帝 Ta Ti	229	黃龍 Hwang Lung	229
		嘉禾 Kia Ho	232
		赤烏 Ch'ih Wu	238
		太元 T'ai Yüan	251
廢帝 Fei Ti	252	建興 Kien Hing	252
		五鳳 Wu Fêng	254
		太平 T'ai P'ing	256

Dynastic Title or Miao Hao 廟號	Date of accession.	Title of Reign or Nien Hao 年號	Date of adoption of Nien Hao.
	A. D.		A. D.
景帝 King Ti	258	永安 Yung Ngan	258
末帝 Wei Ti	264	元興 Yüan Hing	264
		甘露 Kan Lu	265
		寶鼎 Pao T'ing	266
		建衡 Kien Hêng	269
		鳳凰 Fêng Hwang	272
		天冊 T'ien Ts'ê	275
		天璽 T'ien Si	276
		天紀 T'ien Ki	277

晉紀 The Ts'in Dynasty.

武帝 Wu Ti	265	泰始 Tai Shih	265
		咸寧 Hien Ning	275
惠帝 Hwei Ti	290	泰康 Tai K'ang	280
		永熙 Yung Hi	290
		元康 Yüan K'ang	291
		永康 Yung K'ang	300
		永寧 Yung Ning	301
		太安 T'ai Ngan	302
		永興 Yung Hing	304
		光熙 Kwang Hi	306
懷帝 Hwai Ti	307	永嘉 Yung Kia	307
愍帝 Min Ti	313	建興 Kien Hing	313
元帝 Yüan Ti	317	建武 Kien Wu	317
		大興 Ta Hing	318
		永昌 Yung Ch'ang	322
明帝 Ming Ti	323	太寧 T'ai Ning	323
成帝 Ch'êng Ti	326	咸和 Hien Ho	326
		咸康 Hien K'ang	335
康帝 K'ang Ti	343	建元 Kien Yüan	343
穆帝 Mu Ti	345	永和 Yung Ho	345
		升平 Shêng P'ing	357

Dynastic Title or Miao Hao 廟號	Date of accession.	Title of Reign or Nien Hao 年號	Date of adoption of Nien Hao.
	A. D.		A. D.
哀帝 Ngai Ti	362	隆和 Lung Ho	362
帝奕 Ti Yi	366	興寧 Hing Ning	363
簡文帝 Kien Wên Ti	371	太和 T'ai Ho	366
孝武帝 Hiao Wu Ti	373	咸安 Hien Ngan	371
		寧康 Ning K'ang	373
安帝 Ngan Ti	397	太元 T'ai Yüan	376
		隆安 Lung Ngan	397
		元興 Yüan Hing	402
		義熙 I Hi	405
恭帝 Kung Ti	419	元熙 Yüan Hi	419

南 宋 紀 The Northern Sung Dynasty,
北 Also styled The Period of
朝 the Northern and Southern rule.

武帝 Wu Ti	420	永初 Yung Ch'u	420
少帝 ^{Shao Ti} 營陽王 ^{Ying Yang Wang}	423	景平 King P'ing	423
文帝 Wên Ti	424	元嘉 Yüan Kia	424
孝武帝 Hiao Wu Ti	454	孝建 Hiao Kien	454
		大明 Ta Ming	457
廢帝 Fei Ti	465	景和 King Ho	465
明帝 Ming Ti	465	泰始 Tai Shih	465
		泰豫 Tai Yü	472
蒼梧王 ^{Ts'ang Wu Wang} 主昱 ^{Chu Li}	473	元徽 Yüan Hwei	473
順帝 Shun Ti	477	昇明 Shêng Ming	477

齊 紀 The Ts'i Dynasty.

高帝 Kao Ti	479	建元 Kien Yüan	479
武帝 Wu Ti	483	永明 Yung Ming	483

Dynastic Title or Miao Hao 廟號	Date of accession.	Title of Reign or Nien Hao 年號	Date of adoption of Nien Hao.
	A. D.		A. D.
明帝 Ming Ti	494	建武 Kien Wu	494
東昏侯 Tung Hwên How	499	永泰 Yung Tai	498
和帝 Ho Ti	501	永元 Yung Yüan	499
		中興 Chung Hing	501

梁紀 The Liang Dynasty.

武帝 Wu Ti	502	天監 T'ien Kien	502
		普通 P'u T'ung	520
		大通 Ta T'ung	527
		中大通 Chung Ta T'ung	529
		大同 Ta T'ung	535
簡文帝 Kien Wên Ti	550	太清 T'ai Ts'ing	547
元帝 Yüan Ti	552	太寶 Ta Pao	550
敬帝 King Ti	555	承聖 Ch'êng Shêng	552
		紹泰 Shao Tai	555
		太平 T'ai P'ing	556

陳紀 The Ch'ên Dynasty.

武帝 Wu Ti	557	永定 Yung Ting	557
文帝 Wên Ti	560	天嘉 T'ien Kia	560
		天康 T'ien K'ang	566
臨海王 Lin Hai Wang	567	光大 Kwang Ta	567
宣帝 Süan Ti	569	大建 Ta Kien	569
後主 How Chu	583	至德 Chih Tê	583
		禎明 Chêng Ming	587

隋紀 The Sui Dynasty.

文帝 Wên Ti	589	開皇 K'ai Hwang	589
		仁壽 Jên Show	601
煬帝 Yang Ti	605	大業 Ta Yeh	605
恭帝 Kung Ti	617	義寧 I Ning	617
		皇泰 Hwang Tai	618

Dynastic Title or Miao Hao 廟號	Date of accession.	Title of Reign or Nien Hao 年號	Date of adoption of Nien Hao.
	A. D.		A. D.

唐紀 The T'ang Dynasty.

高祖	Kao Tsu	618	武德	Wu Tê	618
太宗	T'ai Tsung	627	貞觀	Chih Kwan	627
高宗	Kao Tsung	650	永徽	Yung Hwei	650
			顯慶	Hien K'ing	656
			龍朔	Lung So	661
			麟德	Lin Tê	664
			乾封	K'ien Fêng	666
			總章	Tsung Chang	668
			咸亨	Hien Hiang	670
			上元	Shang Yüan	674
			儀鳳	I Fêng	676
			調露	Tiao Lu	679
			永隆	Yung Lung	680
			開耀	K'ai Yao	681
			永淳	Yung Shun	682
			弘道	Hung Tao	683
中宗	Chung Tsung	684	嗣聖	Sz' Shêng	684
武后	Wu How	684	光宅	Kwang Tsê	684
[the Empress Wu]			垂拱	Chui Kung	685
			永昌	Yung Ch'ang	689
			載初	Ts'ai Ch'u	689
			天授	T'ien Show	690
			如意	Ju I	692
			長壽	Ch'ang Show	692
			延載	Yen Tsai	694
			證聖	Tiao Shêng	695
			天冊萬歲	T'ien Ts'ê Wan Sui	695
			萬歲通天	Wan Sui T'ung T'ien	696

Dynastic Title or Miao Hao 廟號	Date of accession.	Title of Reign or Nien Hao 年號	Date of adoption of Nien Hao.
	A. D.		A. D.
The Empress Wu [continued]		神功 Shên Kung	697
		聖歷 Shêng Li	698
		久視 Kiu Shih	700
		大足 Ta Tsu	701
		長安 Ch'ang Ngan	701
中宗 Chung Tsung [resumed the Throne]		龍神 Lung Shên	705
		景龍 King Lung	707
睿宗 Jui Tsung	710	景雲 King Yün	710
		太極 T'ai Ki	712
		延和 Yen Ho	712
玄宗 Hsüan Tsung [sometimes written 元宗 Yüan Tsung]	713	開元 K'ai Yüan	713
		天寶 T'ien Pao	742
肅宗 Su Tsung	756	至德 Chih Tê	756
		乾元 K'ien Yüan	758
		上元 Shang Yüan	760
		寶應 Pao Ying	762
代宗 Tai Tsung	763	廣德 Kwang Tê	763
		永泰 Yung Tai	765
		大曆 Ta Li	766
德宗 Tê Tsung	780	建中 Kien Chung	780
		興元 Hing Yüan	784
		貞元 Chêng Yüan	785
順宗 Shun Tsung	805	永貞 Yung Chêng	805
憲宗 Hien Tsung	806	元和 Yüan Ho	806
穆宗 Mu Tsung	821	長慶 Ch'ang K'ing	821
敬宗 King Tsung	825	寶歷 Pao Li	825
文宗 Wên Tsung	827	太和 T'ai Ho	827
		開成 K'ai Ch'êng	836
武宗 Wu Tsung	841	會昌 Hwei Ch'ang	841
宣宗 Süan Tsung	847	太中 T'ai Chung	847

Dynastic Title or Miao Hao 廟號		Date of accession.	Title of Reign or Nien Hao 年號		Date of adoption of Nien Hao.
		A. D.			A. D.
懿宗	I Tsung	860	咸通	Hien T'ung	860
僖宗	Hi Tsung	874	乾符	K'ien Fu	874
			廣明	Kwang Ming	880
			中和	Chung Ho	881
			光啓	Kwang K'i	885
			文德	Wên Tê	888
昭宗	Chao Tsung	889	龍紀	Lung Ki	889
			大順	Ta Shun	890
			景福	King Fu	892
			乾寧	K'ien Ning	894
			光化	Kwang Hwa	898
			天復	T'ien Fu	901
			天祐	T'ien Yew	904
昭宣帝	Chao Süan Ti	905	天祐	T'ien Yew	905

後梁紀 The Posterior Liang Dynasty.

太祖	T'ai Tsu	907	開平	K'ai P'ing	907
			乾化	K'ien Hwa	911
均王	Kiün Wang	915	貞明	Chêng Ming	915
			龍德	Lung Tê	921

後唐紀 The Posterior T'ang Dynasty.

莊宗	Chwang Tsung	923	同光	T'ung Kwang	923
明宗	Ming Tsung	926	天成	T'ien Ch'êng	926
			長興	Ch'ang Hing	930
閔帝	Min Ti	934	應順	Ying Shun	934
潞王	Lu Wang	934	清泰	Ts'ing Tai	934

後晉紀 The Posterior Tsin Dynasty.

高祖	Kao Tsu	936	天福	T'ien Fu	936
齊王	Ts'i Wang	954	開運	K'ai Yün	954

Dynastic Title or Miao Hao 廟號	Date of accession.	Title of Reign or Nien Hao 年號	Date of adoption of Nien Hao.
	A. D.		A. D.

後漢紀 The Posterior Han Dynasty.

高祖	Kao Tsu	947	乾祐	K'ien Yew	947
隱帝	Yin Ti	948	乾祐	K'ien Yew	948

後周紀 The Posterior Chow Dynasty.

太祖	T'ai Tsu	951	廣順	Kwang Shun	951
世宗	Shih Tsung	954	顯德	Hien Tê	954
恭帝	Kung Ti	959	顯德	Hien Tê	959

宋紀 The Sung Dynasty.

太祖	T'ai Tsu	960	建隆	Kien Lung	960
			乾德	K'ien Tê	963
			開寶	K'ai Pao	968
太宗	T'ai Tsung	976	太平興國	T'ai P'ing Hing Kwo	976
			雍熙	Yung Hi	984
			端拱	Twan Kung	988
			淳化	Shun Hwa	990
			至道	Chih Tao	995
真宗	Chên Tsung	998	咸平	Hien P'ing	998
			景德	King Tê	1004
			大中祥符	Ta Chung Siang Fu	1008
			天禧	T'ien Hi	1017
			乾興	K'ien Hing	1022
仁宗	Jên Tsung	1023	天聖	T'ien Shêng	1023
			明道	Ming Tao	1032
			景祐	King Yew	1034
			寶元	Pao Yüan	1038
			康定	K'ang Ting	1040

Dynastic Title or Miao Hao 廟號	Date of accession.	Title of Reign or Nien Hao 年號	Date of adoption of Nien Hao.
Jên Tsung [continued]	A. D.	慶曆 K'ing Li	A. D. 1041
		皇祐 Hwang Yew	1049
		至和 Chih Ho	1054
		嘉祐 Kia Yew	1056
英宗 Ying Tsung	1064	治平 Chih P'ing	1064
神宗 Shên Tsung	1068	熙寧 Hi Ning	1068
		元豐 Yüan Fêng	1078
哲宗 Chê Tsung	1086	元祐 Yüan Yew	1086
		紹聖 Shao Shêng	1094
		元符 Yüan Fu	1098
徽宗 Hwei Tsung	1101	建中靖國 Kien Chung Tsing Kwo	1101
		崇寧 Ts'ung Ning	1102
		大觀 Ta Kwan	1107
		政和 Chêng Ho	1111
		重和 Chung Ho	1118
		宣和 Süan Ho	1119
欽宗 K'in Tsung	1126	靖康 Tsing K'ang	1126

南宋紀 The Southern Sung Dynasty.

高宗 Kao Tsung	1127	建炎 Kien Yen	1127
		紹興 Shao Hing	1131
孝宗 Hiao Tsung	1163	隆興 Lung Hing	1163
		乾道 K'ien Tao	1165
		淳熙 Shun Hi	1174
光宗 Kwang Tsung	1190	紹熙 Shao Hi	1190
寧宗 Ning Tsung	1195	慶元 K'ing Yüan	1195
		嘉泰 Kia Tai	1201
		開禧 K'ai Hi	1205
		嘉定 Kia Ting	1208
理宗 Li Tsung	1225	寶慶 Pao K'ing	1225
		紹定 Shao Ting	1228

Dynastic Title or Miao Hao 廟號	Date of accession.	Title of Reign or Nien Hao 年號	Date of adoption of Nien Hao.
	A. D.		A. D.
Li Tsung [continued]		端平 Twan P'ing	1234
		嘉熙 Kia Hi	1237
		淳祐 Shun Yew	1241
		寶祐 Pao Yew	1253
		開慶 K'ai K'ing	1259
		景定 King Ting	1260
度宗 Tu Tsung	1265	咸淳 Hien Shun	1265
恭帝 Kung Ti	1275	德祐 Tê Yew	1275
端帝 Twan Ti	1276	景炎 King Yen	1276
帝昺 Ti Ping	1278	祥興 Siang Hing	1278

元紀 The Yüan Dynasty.

世祖 Shih Tsu	1280	至元 Chih Yüan	1280
成宗 Ch'êng Tsung	1295	元貞 Yüan Chêng	1295
		大德 Ta Tê	1297
武宗 Wu Tsung	1308	至大 Chih Ta	1308
仁宗 Jên Tsung	1312	皇慶 Hwang K'ing	1312
		延祐 Yen Yew	1314
英宗 Ying Tsung	1321	至治 Chih Chih	1321
泰定帝 Tai Ting Ti	1324	泰定 Tai Ting	1324
		致和 Chih Ho	1328
明宗 Ming Tsung	1329	天曆 T'ien Li	1329
文宗 Wên Ti	1330	天曆 T'ien Li	1330
		至順 Chih Shun	1330
順帝 Shun Ti	1333	元統 Yüan T'ung	1333
		至元 Chih Yüan	1335
		至正 Chih Chêng	1341

明紀 The Ming Dynasty.

太祖 T'ai Tsu	1368	洪武 Hung Wu	1368
惠帝 Hwei Ti	1399	建文 Kien Wên	1399

Dynastic Title or Miao Hao 廟號	Date of accession.	Title of Reign or Nien Hao 年號	Date of adoption of Nien Hao.
	A. D.		A. D.
成祖 Ch'êng Tsu	1403	永樂 Yung Lo	1403
仁宗 Jên Tsung	1425	洪熙 Hung Hi	1425
宣宗 Süan Tsung	1426	宣德 Süan Tê	1426
英宗 Ying Tsung	1436	正統 Chêng T'ung	1436
代宗 ^{Tai} Tsung 景帝 ^{King} Ti	1450	景泰 King Tai	1450
英宗 Ying Tsung [resumed government]	1457	天順 T'ien Shun	1457
憲宗 Hien Tsung	1465	成化 Ch'êng Hwa	1465
孝宗 Hiao Tsung	1488	弘治 Hung Chih	1488
武宗 Wu Tsung	1506	正德 Chêng Tê	1506
世宗 Shih Tsung	1522	嘉靖 Kia Tsing	1522
穆宗 Mu Tsung	1567	隆慶 Lung K'ing	1567
神宗 Shên Tsung	1573	萬歷 Wan Li	1573
光宗 Kwang Tsung	1620	泰昌 Tai Ch'ang	1620
熹宗 Hi Tsung	1621	天啟 T'ien K'i	1621
莊烈帝 Chwang Lieh Ti	1628	崇禎 Ts'ung Chêng	1628

天清朝 The Ts'ing Dynasty.

肇祖原皇帝*			
Chao Tsu Yüan			
興祖直皇帝*			
Hing Tsu Chih			
景祖翼皇帝*			
King Tsu Yih			
顯祖宣皇帝	1583		
Hien Tsu Süan			
太祖高皇帝	1616	天命 T'ien Ming	1616
T'ai Tsu Kao			
太宗文皇帝	1627	天聰 T'ien Tsung	1627
T'ai Tsung Wên		崇德 Ts'ung Tê	1636

* These were in reality titles conferred by the Manchurian chieftains, upon whom titular honours were conferred by the Chinese emperor after the conquest of China.

Dynastic Title or Miao Hao 廟號	Date of accession.	Title of Reign or Nien Hao 年號	Date of adoption of Nien Hao.
	A. D.		A. D.
世祖章皇帝 Shih Tsu Chang	1644	順治 Shun Chih	1644
聖祖仁皇帝 Shêng Tsu Jên	1662	康熙 K'ang Hi	1662
世宗憲皇帝 Shih Tsung Hien	1723	雍正 Yung Chêng	1723
高宗純皇帝 Kao Tsung Shun	1736	乾隆 K'ien Lung	1736
仁宗睿皇帝 Jên Tsung Jui	1796	嘉慶 Kia K'ing	1796
宣宗成皇帝 Süan Tsung Ch'êng	1821	道光 Tao Kwang	1821
文宗顯皇帝 Wên Tsung Hien	1851	咸豐 Hien Fêng	1851
The reigning Sovereign	1862	同治 T'ung Chih	1862

THE Prince of Kan to his younger brother the English Interpreter Forrest. In reply to your note, I now enclose the Sign Manual of the Heavenly King, written with the vermillion pencil on yellow satin in ten characters, also four packages of the Sacred Books May your promotion be lofty and speedy!

NANKING, *August 4th*, 1861.



ARTICLE IX.

 THE CHRISTIANITY OF HUNG TSIU TSUEN,
 A REVIEW OF TAEPING BOOKS.

BY ROBERT JAMES FORREST, Esq.,

H. B. M.'s Acting Consul.

NINGPO.

IN considering the Taeping rebellion I conceive this to be the time to store up materials for after use. Passions and prejudices are too strong now on matters Chinese to hope for a true or impartial history of this great omen, this wonderful rise and fall of a power that swept through the fairest portion of the Empire like a flight of locusts and cost twenty one millions of lives before its downfall. As far as Shanghai is concerned the magnitude of the great rebellion has been entirely lost sight of, and probably all that interests, or has interested, residents here is the history of Gordon's campaign. The fall and recapture of little towns like Kading and Taitan excited more attention among foreigners than the fall of provincial cities, the subjugation of distant provinces, and the fate of the southern capital itself. The memory even of the Kiangsu campaign is fast dying out, and the monument on the Bund will soon be the only sign left wherewithal to call to mind the exciting times of the Taeping campaign.

Should some future diligent historian of China trouble himself to wade through contemporaneous records in order to arrive at the facts of the rebellion, especially as regards the ultimate interference of foreign governments, he will not fail to be a little amused at the alternate favour and hatred with which the Taeping movement was regarded. While rebellion was confined to the southern provinces of China and did not much interfere with foreign trade, foreign sympathy, if I may judge from published papers, was with the rebels. Our difficult position at Canton, the obstinacy and corruption of the mandarins, and the fast increasing belief that oppressed nationalities have a divine right to rebel, all tended to a favourable view of the movement. Then came our war, and with it many years of obstinate and senseless hatred of every thing connected with the existing government. Our difficulty became Taeping opportunity, and while we were

marching against the Imps in the north, the half starved and nearly conquered rebels made a grand dash for Chehkiang and Kiangsu. With a stroke of military genius not sufficiently known or appreciated, Chung Wang by threatening Hangchow compelled his foe to raise the siege of Nanking, and the cities along the Grand Canal soon changed masters. But about the same time that the rebels came against Shanghai the Taku forts were taken, and affairs in the north soon began to mend. The defence of Shanghai by the allies was the death blow of the kingdom of Great Peace. All former friendliness to the rebel cause changed; the abuse so freely heaped on their adversaries fell upon them, and the forces of England returning from the northern campaign were set in motion against their late enemies' enemy. Foreign residents, especially in Shanghai, were for putting to the fire and sword every thing rebel, forgetting altogether that in so doing they were killing the goose that laid the golden egg—that the extraordinary prosperity of Shanghai at that time was caused principally by the rebellion. In the pages of the local press from 1860 until 1864 is to be found every epithet of abuse known to a language, not at all poor in such expressions, all directed against the rebels, and yet if it went to the vote to-morrow how many foreigners would not wish them back again?

So if I were to tell that order did really reign at Nanking,—very like the Warsaw article it is true, but still order,—that there were some uncommonly clever generals among T'ien Wang's officers, notably the Chung, Ying, and Mo Wangs—that in places not actually the seat of war the ground was well cultivated—that the conduct of the Taeping troops was not one bit worse than that of the imperialists,—and that the inhabitants of such towns as Shaoshing and Hangchow have asserted that their lot under Ch'angmao rule was infinitely better than their unhappy fate when those cities were recovered and fell for a time into the hands of barbarian officers;—if I stated these things, with every proof, I should be reviled as a rebel and a speaker of blasphemy against the brilliant political dawn now spreading over the empire. I never saw a foreigner return from Soochow (his excellent sport the result of the late troubles) who did not indulge in strong invectives against the rebels for the destruction of the enormous suburbs of that city. And yet the rebels burnt neither Soochow nor its suburbs. The imperialist soldiery did it

seven days before Chung Wang left Woosi! But facts, no matter how recorded, never overthrow prejudice. The suburbs of Soochow will always rise in judgment against the Ch'angmaos though they were innocent of their destruction; and my experiences of Taeping rule, although the result of a long residence at the Capital, will never be favourably regarded, if in any way opposed to existing ideas. But there is one subject on which I can safely speak, and that is the theology of T'ien Wang and his followers. If any one disagrees with me I can refer him to my sources of information—the books of the heavenly dynasty published by authority at Nanking. These books were presented to me by command of his Celestial Majesty through the agency of the well known prince of Kan, who after teaching the Christian religion in the interests of the Baptists or Independents at Shanghai, became a prince of Taepingdom, and was shot the other day on the walls of Changchow-foo.

The early theology of the Taepings, as far as limited sources of information would admit, has already been excellently and ably described by writers and sinologues. Their essays and translations might have convinced theologians that but little could be hoped for from the so-called inspiration of T'ien Wang; and missionaries might have been taught to despair of converting to any known or rational sect of the Christian faith one who was the uterine brother and equal of Christ, and to whom was confided by the Almighty personally the interpretation and establishment of the faith. Such however was not the result of our earliest knowledge of the Taeping religious leanings: for I call to mind (whatever may be their opinions now) that in 1859, 60, 61 and 62 there existed a large party who believed the rebel movement to be essentially a Christian one, and one through the agency of which, if successful, the darkness covering China was to be changed into the light of true religion. And it is very curious that a movement which in this our revolutionizing nineteenth century could most easily be defended on a dozen strong, almost unanswerable, grounds, was defended only on its weakest and most ludicrous point, its grotesque Christianity! On the capture of the cities on the canal, missionaries proceeded to Soochow, and were well received by the chiefs, who listened with patience to their messages, gave them no unfavourable opinion of their spiritual condition, and secretly looked on them as political agents. The invitation sent by Hung-tsiu-tsuen to the Reve-

rend Issachar Roberts, his old school master, to proceed to Nanking, where he was made a Heaven's Righteousness (T'ien-i) and had some temporal advantages thrust upon him, excited the emulation, perhaps the envy, of other foreign religionists. The new vineyard was tried by several excellent ministers, but found to be barren. T'ien Wang as well as his chiefs expected from their foreign visitors temporal as well as spiritual advantages. If the tracts and books bestowed on the celestial soldiery, after yielding up the instruction contained in them, were converted into cartridges, copper caps were still required to make them ultimately useful, and these the foreign guests were unable and unwilling to give. So the heavenly capital was soon deserted by all missionaries except Roberts, whose gifts being purely theological, and not calculated to instruct either soldiers or people in their temporal avocations, were soon neglected. He became a burden to his supporters, and his ultimate flight to a British gun-boat, when supplies ceased, is a well known story. Had a man of hard worldly talent occupied Roberts' place and original influence at Nanking, the fate of the rebels might have been other than it was. Had the chiefs been taught to avoid foreigners and to keep their weapons in better order, to make their soldiers drill and not devastate the country, T'ien Wang might still be fulminating his doxologies from Nanking.

According to the official catalogue the books published by authority at Nanking up to 1852 were twenty eight in number and consist of forty eight volumes. I have the whole of them with the exception of the Trimetrical classic, and one volume of the New Testament. They are very badly printed on bad paper, but this is hardly to be wondered at. The style is execrable, and in places it is impossible to trace any meaning in the text. Characters are falsely used, some only half cut, or plainly mark the southern and lowly origin of T'ien Wang and the want of education in his officers. The reading is dreary in the extreme. There is no imagination, no imagery displayed, even in the record of visions and visits to heaven. The rhythm sometimes attempted is suggested by Gutzlaff's Translation of the Bible, and the poetry is feeble beyond expression. It is nothing but a perpetual ringing of changes on the Doxology, with Tung Wang for Holy Ghost, and the assertion that the Heavenly Father has sent Hung to rule over the hills and streams, and spread Great Peace over the earth! I became possessed while at Nanking of a

manuscript, in which was recorded day by day the edicts, promotions, and visions, of the Heavenly King and his son the Junior Lord. This book commences with the Chinese New Year in 1861 and finishes with an ode about the end of May of the same year. It is curious as probably the last work dictated by the chief, for in May 1861 proclamations were issued in Nanking informing the myriad places that God had appeared to His Majesty's wife and informed her that her husband was to work no more. This book from which I shall make extracts below is more carelessly written than any work I have seen from Nanking, in fact a considerable falling off is observable in the later T'ien-ping books from those first published, in which at all events some little care is to be distinguished.

T'ien Wang asserts that his heavenly father frequently visited him on earth, and in the "T'ien fu hsia fan chao shu"—the "book concerning the descent of the Heavenly Father," full particulars are given of one of those divine visits, which will not fail to amuse, if they do not edify, my readers. In December 1852, the northern prince and followers went to pay a visit of congratulation to the eastern prince Ts'eng, and after they had retired God came down and spoke to Yang-shui-chao, Hu-chü-mei and two other women apparently relations of T'ien Wang and female ministers of state, desiring them through Tung Wang to tell the chief that a little less severity ought to be exercised with regard to the women in the great Dragon Palace. So the gong was beaten, and Tung Wang having heard the women's tale announced his intention of going to the celestial court to tell the heavenly commands. I quote the result from the published notes of a well-known sinologue. "The Eastern Prince then commanded the Northern Prince and all the officers to go first to court. The Northern Prince was about to proceed thither accordingly, when he suddenly addressed Chin-teh-sung, the chamberlain of the northern palace, saying: 'Do you go quickly to the Eastern Princes' sedan, and request the favour of his instructions as to whether we are first to go to the hall of audience or to enter straight into the door of the palace.' The chamberlain, receiving this charge, went at once to the sedan of the Eastern Prince and requested one of his servants to obtain and communicate to him the wishes of the Eastern Prince. The servant said, 'The Eastern Prince is enjoying repose in his sedan, I dare not disturb him.' The chamberlain of the northern palace,

hearing that the Eastern Prince was enjoying repose, did not presume to repeat the enquiry, but hastened back to inform the Northern Prince, who thereupon hastily descended from his sedan and proceeded on foot to the middle of the road, where he knelt down and enquired saying.—‘Has the Heavenly Father troubled himself to come down into the world again?’ To which the Heavenly Father replied in the affirmative, and told the Northern King to convey the sedan into the hall of audience. The Northern Prince replied ‘I will obey the injunctions of the Heavenly Father.’ Whereupon he hastily ordered the female officers of the celestial court to inform the Celestial King of the circumstance; which done he together with the ministers of state conveyed the sedan of the Eastern Prince within the gate of the palace. The celestial king Hung having heard the message hastily went on foot to the second gate of the palace to receive the Heavenly Father. The Heavenly Father on his arrival was angry with Hung saying, Tsiu-tsuen, you are very much in fault, are you aware of it? The Celestial King kneeling down with the Northern Prince replied saying, ‘Your unworthy son knows that he is in fault and begs the Heavenly Father graciously to forgive him.’ The Heavenly Father then said with a loud voice. ‘Since you acknowledge your fault you must be beaten with forty blows.’ Then the Northern Prince and officers prostrated themselves on the ground and weeping implored the Heavenly Father to manifest his favour and remit the punishment which their master had deserved, offering to receive the blows themselves. The Celestial King replied, ‘Your unworthy son will comply with your requisition’ and prostrated himself to receive the blows. The Heavenly Father then said, ‘Since you have obeyed the requisition I shall not inflict the blows. But the women Yang-chang-mei and Shih-luy-lang must be sent to the palace of the Eastern Prince; with regard to other matters you must wait till your brother Tséng sends up his reports. I shall now go back to heaven,’ and the Heavenly Father returned to heaven. The Eastern Prince afterwards awoke from his trance and remarked on hearing that the Heavenly Father had again come down, ‘Has he indeed, truly he gives himself a great deal of trouble on our account.’” The machinery of these celestial visitations was simple in the extreme. A western pretender would have scorned such a childish mode of deception. We may smile at the idea of Ting, Prince of the East, speaking in the name of the Almighty,

and telling his chief to wait until his brother Tsêng (himself) sent up his reports; but the captains of the empire of Great Peace knew that the inevitable sword was ready to cure all doubters, and quietly accepted, if they did not believe, the manifestations. The reports of Tsêng, given by him to the T'ien Wang by divine direction, reveal an awful state of things in the imperial palace. Here is a portion of the book concerning the descent of the Heavenly Father, which I again take from the notes before referred to: "through the grace of the Heavenly Father the number of ladies at the court is very great.....you should not kill for every trifling offence. When the ladies wait upon you, my elder brother, it is of course their duty, but sometimes they may be apt to excite your righteous indignation, in which case you must treat them gently, and *not kick them with your boots on*; for if you kick them with your boots on it may be that some of the ladies are in such a state as to call for the congratulations of their friends, and then you will interfere with the kind intentions of your Heavenly Father who loves to foster human life. Further when any of the ladies are in the state above alluded to, it would be as well to manifest a little gracious consideration and allow them to rest from their labours. Such a treatment would be proper, and if still any of the ladies should commit any trifling fault it would be as well to excuse them from being beaten with the bamboo!" I was told by Chung Wang's brother in Nanking that T'ien Wang murdered such wives as offended him, and this extract places the matter beyond much doubt. Of a verity a heavenly king ruling a heavenly dynasty and entitled to the tender spiritual cares of foreign missionaries! Further on in the same book Tung Wang gives some hints concerning the education of the Junior Lord. He tells T'ien Wang that if not looked after the boy will break some of the splendid toys given to him by God the Father! that if he goes out in the rain he will get wet. He also calls his Celestial Majesty's attention to the dragons painted on the walls of the palace and engraved on the utensils used therein, stating that they are precious dragons, and not imps, which the chief is commissioned to destroy. The Celestial King replied. "Your observation, brother Tsêng, is correct. Formerly when our Celestial Brother came down upon the Ping-tsai hill he commanded me saying dragons are fiends. I then asked my Celestial Brother. 'Is the dragon depicted on the hall of the golden dragon also to be considered a fiend?' To

which my brother replied. 'The dragon depicted in the golden dragon hall is a very precious emblem and not a fiend!'" Here is a vision recorded by the king's brothers in "The book of the evidence of what the prince's brothers saw with their eyes and heard with their ears." "At 11 o'clock on 1st day of 3rd month of T'ien-yiu year we (Jên-fah and Jên-tah) were thanking God and the Heavenly Brother, who bestowing heavenly grace upon us deputed heavenly officers and hosts to accompany our true sacred lord the T'ien Wang to heaven, and our lord has vouched for the facts. Musicians with harps, reeds, drums and all manner of music accompanied him. The thunder went before his face like a cock. The celestial host conveyed his chariot by the great road in the east up to heaven. On each side of the gates of heaven were innumerable beautiful damsels to receive him. He dwelt there two days and then descended, and informed us and the Junior Lord saying: 'I shall rule all people in the myriad places. The bounty of the earth is for me to eat. I am indeed the son of God the Heavenly Father!' A few days afterwards he again went to heaven and did battle with the imps and devils, and while slaying the imps and devils he exclaimed, 'O my brother help me,' and by Ako* he meant the Heavenly Brother. He again called out for the officers of Yang's household and for Chao-yuen-lang, saying Chao was sent as an example. God then gave him the seven characters 天王大道君王全 T'ien Wang ta tao keuen wang chuen. He then went up into the highest heaven and slew one by one the imps and cast them into hell. Our lord has verified this and says: What time I was slaying the imps God was behind my brother, who was behind me. We three Lords led on the hosts and pursued the imps and fiends, God then gave me a seal and I slew the imps and stayed not my hand; my brother then took the seal and shewed it to the imps who ran away, and the seal is that where-with the Lord made heaven and earth. Sometimes God took the seal, sometimes Christ, and sometimes I myself. So the seal is common to us. Wherever that seal was taken the imps fled and our Lord looked and lo! eminent relations flocked and congratulated him, and wicked men came who were envious of him and abused him with a loud voice.....Then the Heavenly King reviled the devils saying: 'I am truly the heavenly son by

* In Cantonese the expression used when speaking to an elder brother.

heaven's command for the extirpation of evil and the exaltation of the good. Don't you know it. Depart quickly! Dare you look upon me. I am king in heaven and earth and have caught you imps and devils as in a net, you cannot escape my hands.' Then he sang the ten odes of great luck." These odes follow but I will not attempt them.

It was hardly to be supposed that Hung-tsiu-tsun would long tolerate the advice of the Eastern Prince when he began to intrigue in the affairs of the palace, although such advice might have been inspired by the Heavenly Father himself. So on a certain night soldiers were ordered to Tung Wang's quarters, his head was cut off, and his immediate followers slain. His palace was razed to the ground, and his name was no longer to be mentioned in the heavenly capital. By proclamation the heavenly king announced that the unfortunate victim having "Attained merit deep as the azure heaven had suffered for the sins of the world and gone to the skies!" After Tung Wang's death the king and his wives alone appear to have been recipients of heavenly visits. Hung appears to have found too much danger in the outspoken inspirations of the Eastern King to allow any other follower to pretend to direct divine favour, and his chiefs, mindful of the fate of him who stood second in the empire, did not care to aspire to miraculous power.

For some years after this murder T'ien Wang was quiescent and gradually lost ground. His grand northern campaign against the imps' den as he called the province of Chili had ended in disaster. The last man of the great army which had marched full of hope from Nanking to take Peking, and utterly exterminate the imps, had fallen by the Tartar sword. The rowdies of Shanghai had guided square rigged ships against Chinkeang and the imps themselves had cast a wall about the heavenly capital. Foreigners troubled themselves but little about the heavenly doings, and affairs seemed hopeless. Yet according to Chung Wang's account the chief was always cheerful and confident that his Heavenly Father would vouchsafe ultimate deliverance. The deliverance came and the Heavenly King's success once more astonished China, and drew upon him the wonder and attention of foreign nations. As city after city fell, the cause carried with it belief. Missionaries explained to the chiefs the sympathy of western nations, and plenty came simultaneously with foreigners to the half starved capital, where Hung

amused himself with controversy with foreigners, and the gospel according to Issachar Roberts. By degrees as the full religious aspirations of the king were manifested his friends became alarmed for his spiritual condition. Fearing that his ideas on the subject of the Trinity and the procession of the Holy Ghost, were a little misty, some well meaning foreign brethren prepared the Athanasian creed for his instruction. His majesty acknowledged with gratitude, and dollars, the tender pains of his brethren, but told them that as he had been to heaven and they had not, they could not possibly know as much as himself concerning the Godhead. It must have amused the old heretic to see with what reluctance his foreign brothers saw the reality of Taeping matters, and how unwilling they were to leave the new field. I remember one night near Soochow an earnest missionary talking to a real Kwangsi rebel who had intruded into my boat, "You believe in our Heavenly Father?" said the missionary. "Yes!" "And in Christ?" "O yes!" replied the ruffian. "You must not murder." "Oh we never do that!" "Nor abuse women! nor steal!" "Oh never!" The man departed with much religious instruction leaving a favourable impression on the mind of his instructor, but not forgetting adroitly to steal my powder flask! Tsiu-tsuen too must have had many a laugh at some of the idiosyncrasies of those who would instruct him in religion. To one American missionary he sent a crown made of gilt pasteboard and a massive gold ring of considerable value. The recipient of these favours telling me the story said. "I at once sent back the paper crown to his majesty, saying that I lusted after a celestial and not a terrestrial crown, and quoted some texts bearing on the subject; but as I could recollect no text that had anything to say about celestial or terrestrial rings, I kept the bauble, and sold it at Shanghai for 70 taels!"

T'ien Wang's theology after Tung Wang's death underwent some little change. He makes himself and son to all intents equal with God. God, Christ, myself and son are Lords for ever was his assertion on every proclamation. In fact he made a practical sort of Godhead of which he and his son were the incarnate half. Yet in the books I hold in review he is very unitarian. Shang-ti with him was always most honourable. He scouts the idea of the equality of the Son. That a son could be equal with the father was a dogma he would never believe. The celestial insanity is painfully apparent in the king's last documents, but

it is always on the theological side. In the few secular despatches I have seen of his, he is sensible until the conclusion when he always rushes into some tremendous dogma, and winds up by asserting his equal kingship with God. Among his manuscript gazettes I find the following for the 1st day of 1st moon of 1861.

"The edict of the Heavenly King. To my nephews Ho and Sêng, to the princes of Kan, T'a, and all celestial captains, commanders and guardians of the heavenly capital both within and without.

"God and Christ have come down among men, and heaven and earth are renewed.

"God and my Elder Brother ordain that I and my son should rule, and my palace is established and renewed.

"The father and son, the grandfather and grandson are Lords indeed, and the kingdom of heaven is renewed.

"God and Mama, the elder brother Christ and his wife came down together, and heaven is renewed.

"The heavenly day of great peace is manifest in the myriad places, and the bounds of the earth are made new.

"Heavenly captains and legions assist me in my work, and rewards and distinctions are renewed.

"On earth as in heaven my sacred commands go forth, and the mountains and seas are renewed.

"The snakes and beasts are slain, and mankind is satisfied and tranquil. Officers and men are renovated.

"All is mine for ten thousand and a thousand times ten thousand years, and the order of the world is renovated.

"The winds and the rains are obedient unto me, and the grace of heaven is spread out. Every thing is renovated."

This is the song he sang when Soochow and the Grand Canal were his, and the imps no longer menaced his capital.

"God, the Elder Brother, myself and son, are the heavenly dynasty. On earth is great peace and the omens of heaven are manifest, old and young, males and females, behold the signs of the heavens. The great brother commanded and lo! it has come to pass. On the 7th of the 2nd moon my mother beheld the kings of the east, west and south, commissioned to exterminate the imps, come to my Golden Dragon palace to greet me Lord of a Myriad Years; and they went forth with the utmost diligence to the conquest of Soochow. Behold Soochow is now won, and

Chên-san-mei is thankful for the doctrine of heaven. In the 5th watch of the 6th day of the 9th moon I was thanking God who vouchsafed an omen—a perfect dream. I beheld a countless host of captains and celestial soldiers coming to offer me sacred things and precious jewels, and respectfully arranging them in the Presence. I laughed inwardly uttering no sound. This morning early in the 5th watch I was praising God and dreamt that I had obtained another city. Whereon I exclaimed ‘On earth no place is useless.’ I told all this and commanded the captains to hear me. In the eleventh year of my reign I ascended into heaven. God and Christ were with me to exterminate the snakes and devils. On either side heaven’s officers and servants protected and aided me to battle and exterminate. I fought until I could no longer move. Myriads of heaven’s officers and soldiers protected me and did my behests until I slept and awakening renewed the fight. Time after time did this occur. God and Christ were with me in the work of exterminating snakes and devils with innumerable officers and soldiers. They supported my body. Whatever I wished to do there were people to do it. So I sang this song.

“In my dreams also am I king and in my sleep govern the hills and the streams. In heaven is the Lord and my Elder Brother dwells on high.

“Commanding that I should reign they encompass me as with a cord.

“Below on the earth have I children and brothers and husbands of sisters. (They with) the whole of the celestial servants aid and assist me.”

Again I find the following among the gazettes. “During the 5th watch of the 6th day of 9th month I beheld an innumerable army coming with presents to God, the Elder Brother and myself. I laughed and was rejoiced. I exclaimed. ‘All the length and breadth of the earth is God’s, the Elder Brother’s, and ours.’ All must be regained for us. And the generals said ‘Be it according to your word.’”

Here is a specimen of a vision which is recorded in the curious manuscript book of gazettes. It will serve to convince most people of the insanity of the celestial king.

“15 day, 1st month—1861. This morning during the 5th watch I had a vision while praising God. He ordered me to slay the tiger imps, those four damnable tigers and two black curs. The

whole heavens rejoiced to assist the heavenly dynasty; the snakes and beasts fled before the presence of God and my brother. All the great ones and people thanked Heaven for its pains, and heaven and earth rested in peace on the advent of Taeping.

"God in his goodness gave me a sign in a vision. Two of my wives were walking with me on the same road; in front they saw four very large yellow tigers opposed to me. My wives were much alarmed, and I feared that if I advanced the tigers would wound the two women, so I took them back. To my astonishment I found these were demon tigers which pursued us; on hitting one with my hand they all changed into the form of men. Then I suddenly awoke. Considering this prognostic important and being uncertain as to its meaning, I besought God my father and Christ my brother to send me another vision to instruct me... God in his goodness sent another dream to direct me in the way. I was seeking for the place where I had struck the tiger and at once found it! Lo! there were four tigers and two black dogs lying down together, and I saw that the tigers were all dead, as was also one of the black dogs, but one was still alive. I caught him by the throat and hit him again and again. The dog in the voice of a man said 'I fear' I said 'I am going to kill you,' and I beat him to death. Counting on my fingers I found I had slain four tigers and two black dogs, altogether six beasts. On hearing of this joyful omen my nephew and young brother went forth to conquer and exterminate the imps, and the scribes were commanded to inscribe this."

Probably the last gazette the king ever wrote is this:

"God, my Brother, myself and son sit in the heavenly hall, the fame of the celestial kingdom of great peace resounds through space. In our heavenly kingdom God is chief in everything and Great Peace is spread out upon the hills and streams. Henceforth let our style be 'the Heavenly Kingdom of God' 上帝天國 God is the universal father.

"Let the signet and all the seals be at once changed, and the proper inscription, 'the Heavenly Kingdom of God' be thereon written. Let the same be cut on the jewelled signet. So by all the seals shall the protection of heaven be made manifest.

"Now I hereby declare to heaven, earth, and men, that God the Heavenly Father is alone most excellent, who was from the spreading out of the heavens until now, the exceeding great creator of all things. Bethinking me that God and my brother

Christ had descended to lead me into the seat of kings, the style of my empire was 'Heavenly Kingdom of Great Peace.' But although God the heavenly ruler is my father, and Heaven's Lord, Christ, my brother, none have the preeminence but God alone. Completely fulfilling the commands of God let the style T'ai p'ing t'ien kuoh be changed into Shang ti t'ien kuoh, 'the Heavenly Kingdom of God.'"

I could quote many more of these extraordinary documents, but the similarity is tiresome. Of some I can make nothing. In fact I may make the same apology as Jên-fah and Jên-tah who inscribed the celestial visions: "We have written as commanded by our true sacred lord, but as the king speaks heavenly language we can only comprehend two or three sentences out of every ten." What I have given may help to convince investigators that the so called visions of Hung were merely the ravings of a man theologically insane. But lest any of the few remaining believers in T'ien Wang as a Christian champion, should object to these extracts as not fully developing the man's creed, I will give a few translations of Hung-tsiu-tsuen's commentaries on the New Testament which ought to place the matter finally at rest. Hung's notes on the New and Old Testaments are written on the margin of the books. He has but little to say on the Old Testament; at which I wonder, as he was loud in his wish to imitate David in the torture of the inhabitants of Rabbah during my stay in Nanking.

On the 4th chap. Matthew the king says as follows. "God is flame, the sun is also flame, therefore God came with the sun. Respect this!"

"God is the holy spirit and came with the Holy Ghost (lêng); after fifty days the Holy Ghost descended and there was a flame and wind, the flame and wind both proceeded from God and accorded with one another: God is flame, therefore a flaming spirit; my brother is flame, therefore a great splendour. I am the sun and, am therefore brilliant. Respect this." Further on he upbraids people for saying the kingdom of heaven is in heaven, when Christ says it was coming quickly, and behold it is now come!

The cleansing of the leper is thus explained. "God rested on the head of my Elder Brother who, when he spoke, uttered the words of God, and therefore cleansed the disease" (smallpox). Speaking of the pacification of the storm in 24 v. of 8th chap. the

king says. "The wind employed by heaven was the Tung Wang, so of course he was obedient. Respect this!" On Matth. 24 (The sun shall be darkened) is remarked: "My Elder Brother when in the world went about secretly because he feared the people. I am the sun; I descended into the world and became man, when I changed I became non-luminous. My wife is the moon. She descended and was incarnate and no longer sheds light. The heavenly captains and hosts, even the stars, became incarnate, and fell from heaven upon the earth. My Elder Brother ascended into heaven on the clouds and shall gather his people together from the four quarters. All must confess this. Respect this." T'ien Wang mystifies the faithful in his interpretation of the verse in chap. 27 where Christ says *Eli, Eli, lama sabachthani*. Christ, he says, in these words secretly confessed that Hung was to be lord and rebuild the temple. No one in Nanking would care to contradict this curious translation.

On Mark Chap. 1 v. 11 (And there came a voice from heaven) he remarks with regard to the Holy Spirit, "It is God. He descended upon my Elder Brother and led him away. How can it be that one Holy Spirit became my brothers body? There is besides another Holy Ghost which makes up the Trinity even Tung Wang. This must be known. Christ plainly said there is only one very God. How then did his disciples fall into the mistake of saying that Christ is God. If theirs is the correct explanation why there must be two Gods. It may wrongfully be explained by saying that Christ is God and that on his ascent he was united with God. How is it that before the time of David my Elder Brother saw God and that God spoke to him; and how is it that when I went to heaven I saw that there were in heaven, God the Father, and the Mother of heaven his wife, and brother Christ, there was also my heavenly sister in law, who is now descended. Truly the Persons are the Heavenly Father, the Heavenly Mother, my Heavenly Brother and his wife."

His remarks on Luke are few and consist of an untranslatable interpretation of the conception, and various warnings against those who consider the Son equal with the Father. Hung is not favourable to St. Paul. He says of Paul's command to uncover the head while praying 1 Cor. 1, 4. "The covering of the head has nothing to do with the desire of the heart, cover or uncover as you like! Respect this!" And further on. "Every one born first receives the soul, and afterwards the body of flesh.

The Lord of souls creates a soul and then sends it into the mother to get a body put to it. The body is begotten of the mother but the soul is of the Lord of souls. The holy kingdom in heaven is the great heavenly hall of God, there are thirty three heavens; earth is the heavenly hall. The great heavenly hall is the place of souls, earth of bodies."

On the third Epistle of John is the following startling announcement. "God is one and most honoured. Christ is his son. The Son is born of the Father, originally one substance united. The Father is alone the Father, the Son the Son; they are one and yet two, two and yet one. As to the Shênglêng (Holy Spirit) that is Tung Wang. By the will of God all plagues and pestilences were upon the Lêng Tung Wang. He was also God's beloved son and with the Elder Brother and myself born of one mother, born before the heavens and earth. God the father is the only true Shên, and only true Shêngshên; God says beside me than shalt have none other Shên, none other Ti. The Shêngshên is God, if there was another Shêngshên there would be another God. The Shêngfung is also the breath 風 of the Holy God Shangti. Not that this Fung is the Shêngshên, for the fung is the Tung Wang who from heaven above sends down wind. Respect this."

He has, as might be naturally expected, some curious notes on the Revelations: On 3rd ch. 12, 13 (Him that overcometh will I make a pillar in the temple of my God, &c.) Hung remarks. "Now that the Elder Brother has descended, the Celestial dynasty has a temple of the true God, the heavenly father Shang ti, and a temple of the elder brother Christ, engraved with the names of God and Christ. The kingdom of God the Father and the New Jerusalem which came down from heaven is fulfilled in the present celestial capital (Nanking). Respect this." On 6th ch. 12, 13, 14 (the sun became black as sackcloth of hair and the moon became as blood) is remarked. "I am the sun, my wife is the moon; to turn black like blood covertly signifies descent and incarnation. The stars of heaven, are the celestial troops! By falling to the earth is covertly meant a descent into the world to exterminate the imps. The passing away of the heavens as a scroll, and the removal of every island and mountain from its place, covertly reveals that in heaven and earth the old is to be exchanged for the new; and now the map of the empire had been made new under the T'ai-p'ings. The captains of the earth

hiding themselves in dens and rocks is a covert revelation that the serpents and beasts were to be slain and the imps exterminated. All this is now fulfilled. Respect this."

11th chapter 15, 18 he says:—"Now the heavenly father Shang-ti and the elder brother Christ have come down and taken myself and the Son to be lords. All countries have already submitted to God and Christ who have brought me to rule for all generations. It is fulfilled. Respect this!" On 12th chapter we are startled at finding that—"The Elder Brother, myself and the Tung Wang, before the heavens and earth, were by the favour of the Heavenly Father, born from the womb of his original wife the Heavenly Mother. Afterwards the Father sent the Elder Brother to be a redemption for sin, and to enter into Mary to be incarnate. This is why the Elder Brother said—'Before Abraham was I am!' When I was in heaven at the time of Abraham I have some recollection of knowing that the father was about to send the elder brother to be born of the seed of Abraham. I therefore went down and blessed and saved Abraham. At that time too, I knew that the Father was going to send me to rule the world, therefore I had a desire to show myself below as Lord: afterwards when I received the Father's commands to enter my mother's womb and descend into the world, I knew that the imp Yenlo (Abaddon) would raise a disturbance, so I besought the father that no harm should arise through him. Afterwards the father commanded me from heaven to be born from the womb of another mother from heaven so that I might be incarnate. I remember that I entered into the womb of this mother, and that the father gave a sign, namely clothing her with the sun to make manifest that that which she had conceived was the Son. I knew that the serpent devil Yenlo also knew that in the womb of this mother was I. Shangti especially sent me into the world to exterminate this serpent. Therefore was it that he wished to devour me and usurp God's heritage; but God is omnipotent and the son born to him could not be injured by the serpent. Behold I testify the truth of myself. In former times Melchisedec was I, and after the Elder Brother had ascended, the child born of the sunclad woman was myself also: now the Father and Elder Brother have come down and brought me to be the lord especially to exterminate this serpent. Lo! the serpents and beasts are slain and the empire enjoys Great Peace. It is fulfilled. Respect this!" On the 14th ch. 15 v. (the angel with the sickle)

is recorded—"Now is the time for the grain to be ripe; I am the lord of the harvest and Tung Wang is the Ho-nai. 20th ch. 10 v. the king says, "What John saw was the celestial hall in heaven above. Heaven above and earth are alike. The New Jerusalem is the present Nanking. God and Christ have descended to make us lords and open the lower celestial hall, so the heavenly hall of God is among men. The wife of the Lamb of God (Shêng kao), is my heavenly sister in law. When I was in heaven how many times did I not see her! Now this heavenly sister has also descended and called me husband's brother (Shüh). Respect this!"

The last commentary is this. "Now since God and Christ have both descended, what holy disciple does not rejoice, and since they have verified the Gospel which has been delivered unto you why dont you believe? This is truly the prediction of my Elder Brother (with regard to me); I also will come like a thief when you dont expect me! Respect this." At all events no one will fail to acknowledge the truth of the last assertion, and it affords a good concluding point. It is Hung's last commentary and the only true one! He did come as a thief; as the desolation of vast tracts of country testifies to this day.

Considering the life of Hung-tsiu-tsuen, I am in no wise astonished at the grotesque monstrosity of his belief. The very slight knowledge six months in Robert's Canton school could have given him of Christianity; his after poverty, troubles and persecutions—all tended to confuse a mind already prone to disease. Then came his regal success. To him, the poor peasant, who had not cash enough wherewith to bribe the examiners at Canton, or the runners of a country tribunal; to whom even the purchase of his daily food was a difficulty; were suddenly given provinces, cities and armies; and the persecuted became the persecutor. His astounding success must have conveyed to his mind, and to those of his followers, an idea that his former ravings during his sickness were realities; that he was indeed the Son of God going forth conquering and to conquer. So neither Hung-tsiu-tsuen's belief, nor its acceptance by his followers, surprises me; my astonishment is reserved for those foreigners, who with the evidence I have just given at their command, could for a moment believe in Taeping Christianity or the sanity of its chief. Alas for defeat! Had the Heavenly King subverted the empire and established his dynasty, his story would have been accepted by the whole country, and for-

eigners would have executed the celestial behests and accepted the celestial gold, without any questioning. A few centuries would have thrown a halo over Hung's works, especially those regarding the unseen world, and have converted the monster into a Saint and Sage. But he rose from the universal rottenness for the bloody service given him to do, and his place knows him no more. For him was ordained a career like that of those monstrous heroes of history, those demigods, who fulfilling some fixed but unknown law, rise from the decay of dynasties and go forth to chastise nations and afflict mankind. And as in the case of all historic parallels the warning, loud and bloody as it was, has been utterly unheeded; nothing has been changed, and nothing will be changed. Read the history of Justinian in Gibbon's Rome and you have an exact history of China at present. As soon as the government here can no longer make play things of foreign forces troubles will begin again. How true was the remark of the old Swedish Chancellor, and how applicable now:—"My son! my son! you know not with how little wisdom the world is governed."

LIST OF T'AI P'ING WORKS.

1. T'ien fu shang ti yen t'i hwang chao.

天父上帝言題皇詔

The Imperial proclamations dictated by God the Father.
(One volume).

2. T'ien fu hsia fan chao shoo.

天父下凡詔書

The book of proclamations regarding the Heavenly Father's visit to earth. (Two volumes).

3. T'ien ming chao chih shoo.

天命詔旨書

The book of proclamations and orders as commanded by heaven.
(One volume).

4. Chiu i chao.

舊遺詔

The old Testament. (Six volumes).

5. Tsien i chao.

前遺詔

The new Testament. (Eight volumes).

6. T'ien t'iao shoo.

天條書

Book of Heaven's commandments.

7. T'ai p'ing chao shoo.

太平詔書

Book of T'ai p'ing proclamations. (Two volumes).

8. T'ai p'ing li chi.

太平禮制

Rules and ceremonies of T'ai-p'ing-dom. (One volume).

9. T'ai p'ing chün muh.

太平軍目

T'ai p'ing army list of officers. (One volume).

10. T'ai p'ing t'iao kwei.

太平條規

The T'ai p'ing list of rules. (One volume).

11. Pan hsing chao shoo.

頒行詔書

Book of disseminated proclamations. (One volume).

12. Lieh.

曆

T'ai p'ing Almanac. (Two volumes).

13. San tzü ching.

三字經

T'ai p'ing Three character classic. (Two volumes).

14. Yu hsio shih.

幼學詩

Poetry for children. (One volume).

15. T'ai p'ing chiu shih kao.

太平救世誥

T'ai p'ing prayers for the salvation of the world. (One volume).

16. Chien t'ien ching yu chin lin lun.

建天京於金陵論

Book regarding the establishment of a heavenly capital at Nanking. (One volume).

17. Pien yao hsue wei tsuy li lun.

貶妖穴爲罪隸論

Lit. Degrading the caves of the imps into the ti (messengers) of sin.

Trans. Book regarding the changing of the name of the province Chih li (directly attached) into Tsuy li (criminally attached). (One volume).

18. Chao shoo kai hsi pan hsing lun.

詔書蓋璽頒行論

Regarding the sealing with the Imperial seal and dissiminating proclamations. (One volume).

19. T'ien ch'ao t'ien mao chih tu.

天朝田畝制度

The heavenly dynasty's regulations with regard to agriculture. (One volume).

20. T'ien ch'ing tao li shoo.

天情道理書

The heavenly book of Tao li (Eternal Fitness "Tò KÁLON.") (One volume).

21. Ch'ien tszū chao.

千字詔

The thousand character classic. (One volume).

22. Hsing chün tsung yao.

行軍總要

Elements of Military Tactics. (One volume).

23. T'ien fu shih.

天父詩

Poetry of God the Father. (Five volumes).

24. Wu liu.

武畧

Strategics. (One volume).

25. Hsing shih wên.

醒世文

Book for awakening the world.

26. Wang ch'ang tzŭ hsiang chin muh chin urh kung chêng fu yin shoo.

王長次兄親自親耳共証福音書

The Gospel of the evidence of what the Prince's Brothers saw with their eyes and heard with their ears. (One volume).

27. Yu chu chao.

幼主詔

The edicts of the young Lord.

28. Sze chieh t'iao leih.

士階條例

Regulations for literary advancement.



ARTICLE X.

CARTE AGRICOLE GÉNÉRALE DE L'EMPIRE CHINOIS.

TEXTE PRÉFACE, LÉGENDE ET RÉPERTOIRE.

PAR MONSIEUR G. EUG. SIMON,

Consul de France à Ning-Po.

I.

C'EST assurément à propos de tous les pays, mais surtout à propos de la Chine, que l'on peut dire qu'aucune division n'est aussi propre qu'une division agricole, à donner une idée rapide et exacte du pays, quelque soit le point de vue auquel on se place.

Que l'on adopte en effet pour la Chine une division Géographique par exemple, et que, les yeux sur la carte, on considère que cet immense Empire s'étend du 18^{ème}. au 46^{ème}. degré de latitude et du 18^{ème}. de longitude occidentale au 16^{ème}. de longitude orientale (Méridien de Pékin); l'esprit se représentera immédiatement les mêmes différences, les mêmes contrastes, les mêmes analogies auxquels la connaissance d'autres contrées situées dans les mêmes limites l'aura habitué.

✓ Pour la plupart des lecteurs, le même degré de latitude représentera le même climat, la même température en Chine, en France, en Russie, en Amérique, &c. et cependant ne donnera aucune indication sur l'orographie ni la topographie de la contrée; logiquement, on sera porté à croire qu'il y a entre les Chinois du Nord et ceux du Sud, ceux des confins du Thibet et ceux des bords de la mer, les mêmes différences qu'entre l'Anglais et l'Espagnol, entre le Français et le Russe. Or rien est moins juste.

En outre la division géographique a encore le grand inconvénient d'évoquer le souvenir des cultures qu'on aura jusqu'à observées dans les mêmes circonscriptions et de là, une suite d'erreurs sur les mœurs, les industries et le commerce des habitants.

Une fois la division géographique admise, l'esprit s'en trouve tellement influencé que lors même qu'il veut ensuite se rendre compte de certains faits spéciaux il ne le peut plus sans un certain effort de raisonnement.

Ainsi, par exemple, une fois la Chine partagée en Nord, Centre, Est, Ouest et Sud, qu'il apprenne que le nord renferme des pâturages et des grains, il sera inévitablement conduit à penser que le système agricole du Nord, est, peut ou doit être souvent un système mixte, céréale et pastorale, tandis que la vérité est que ce système mixte n'est qu'une très rare exception; de là encore de graves erreurs sur les conditions politiques et économiques du pays:

Une division agricole au contraire explique tout à l'instant; si l'on remarque par exemple que le blé, pris comme type d'une région n'est pas cultivé au dessus de tel degré de latitude, on en conclura naturellement qu'au dessus de cette zone, le climat est beaucoup plus froid que dans tel ou tel autre pays où le blé remonte plus haut, et on en déduira une altitude plus élevée, le voisinage de hauts plateaux sans aucune végétation qui adoucisse la température.

Que si l'on aperçoit au milieu de ces espaces d'où le blé est exclus, la présence de certains végétaux qui ne croissent que dans les zones tempérées, on en conclura tout aussi naturellement qu'il existe là quelque crevasse profonde, quelque excavations de montagne, où la latitude, n'étant plus combattue par l'altitude, reprend tous ses droits;—que si la carte indique la présence du riz au dessus de la ligne où s'arrêtent d'autres plantes dont il semble pourtant être ailleurs le compagnon inséparable, ce sera là encore un indice certain du climat, et il suffira de remarquer que ces plantes se trouvent en terre pendant l'hiver aussi bien que pendant les autres saisons, tandis que le riz ne s'y trouve que pendant l'été et une partie du printemps et de l'automne; pour qu'on puisse affirmer sans hésiter que l'été est très chaud et l'hiver très froid, ou qu'en d'autres termes les extrêmes de températures sont très éloignés, éloignement dont la mesure pourra même être donnée par l'écart existant entre la dernière ligne des plantes en question et la dernière du riz.

Enfin, que s'il croît dans les mêmes lieux quelque végétal, plante, arbre ou arbuste qu'en France par exemple le froid paralyse souvent d'un côté et finisse par tuer, comme le *Diospyros Kaki* (Sse-Tze) ou comme le mûrier ou le jujubier qui ne vient pas dans d'autres pays sous des latitudes considérées comme plus chaudes, il sera certain que les saisons sont parfaitement distinctes, qu'il n'y survient pas de froids tardifs ou précoces qui surprennent la végétation en mouvement, et que l'atmosphère pendant l'hiver n'est troublée par aucun vent fort.

Ainsi l'on aura d'abord la climatologie, l'orographie et jusqu'à un certain point la géologie de la contrée.

On en aura également l'industrie et le commerce; non pas seulement le commerce et l'industrie des produits immédiats ambiants, ce qui est d'une naïve évidence, mais le commerce et l'industrie dûs aux produits des contrées voisines. Qui filera et tissera la laine des troupeaux des Mongols par exemple? Ce ne sera pas les Mongols eux mêmes, qui étant pasteurs et forcément nomades, ne peuvent pas être industriels; mais ce sera, à coup sûr, leurs voisins, les stables et sédentaires Chinois, et *a priori* on pourra sans craindre de se tromper placer les fabriques de draps, de feutres, de tapis aux abords de la grande muraille et sur les frontières Chinoises du Thibet. Quant aux Mongols, ils resteront pasteurs et pourront par surcroît se livrer à la chasse, la seule occupation qui puisse se concilier avec leur état principal.

Ce n'est pas tout: dans quelles conditions est l'industrie? Est elle concentrée dans de vastes ateliers, occupant un grand nombre d'ouvriers?

Or, on ne voit d'abord dans les environs, aucune trace de forêts ni de prairies, mais le terrain est couvert de récoltes farineuses et potagères. De là absence ou insuffisance d'animaux de travail, besoin d'engrais, nécessité de la culture à la main, densité de la population; de là, division de la propriété. Tout habitant ou du moins tout chef de famille est propriétaire et forcé de travailler, par lui même ou par les siens; pas de grands ateliers, le travail en communauté de la famille et ainsi: constitution de la famille.

Est-il besoin d'ajouter pas de grands propriétaires? Pas de grands domaines, pas de féodalité, la démocratie et tout l'ensemble d'institutions qu'elle entraîne et qui la conservent.

Si ensuite on ne découvre dans toute l'étendue du même Empire aucune séparation tranchée entre les cultures fondamentales, sera-t-il trop hardi d'en présumer une fusion analogue entre les habitants, et peut-être l'unité parfaite de leurs mœurs et de leurs lois?

Enfin qui ne sait l'influence du milieu, du climat, de l'alimentation et des institutions sur le développement physique de l'homme? Et de tout ce qui précède sera-t-il difficile d'en déduire des renseignements utiles relatifs à la physiologie, à l'anthropologie, &c., &c.?

C'est inspiré de ces pensées que je ne puis guère qu'énoncer ici, mais dont le travail auquel je suis occupé depuis longtemps sur la

Chine et qui sera incessamment publié est pour ainsi dire la preuve circonstanciée, que j'ai entrepris la carte agricole de la Chine.

Si je ne me suis pas trompé, si l'agriculture est l'axe ou le pivot de la civilisation Chinoise, ce qui, inaperçu explique pourquoi elle est si peu comprise jusqu'à présent, si l'agriculture est la clef de voûte de cet immense et presque éternel édifice social qui abrite plus de cinq cents millions d'hommes; ma carte ne sera pas seulement intéressante pour l'agriculteur de nos pays mais elle sera utile aussi aux négociants, aux industriels qui, en attendant une carte spécialement industrielle et commerciale que je leur promets, voudront se rendre compte du genre et de la nature du commerce et de l'industrie d'une partie du monde vers laquelle tous les yeux commencent à se tourner aujourd'hui: elle sera utile aux économistes, aux diplomates dont le devoir est avant tout de connaître les conditions économiques, les besoins et les possibilités du peuple avec lequel ils traitent: elle sera utile enfin aux hommes d'Etat et aux savants qui se sentiront quelque attrait pour l'étude sérieuse du plus ancien Empire du Monde.

On demandera comment j'ai pu réunir les nombreux éléments d'un aussi grand travail? Ma réponse est dans les fonctions que j'ai successivement remplies depuis six ans. Pendant plus de trois ans et demi d'abord, délégué du Ministère de l'Agriculture et du commerce j'ai parcouru une grande partie de la Chine; des bords de la mer mon pied est allé heurter aux derniers contreforts des chaînes du Thibet et s'enfoncer dans les sables mouvants de la Mongolie; pendant plus de trois ans et demi je n'ai cessé d'explorer les différentes régions agricoles comprises dans ces lointaines limites, et depuis deux ans que par la bonté de Son Excellence Monsieur Drouyn de L'Huys je me trouve rattaché au pays que j'avais ainsi appris à connaître et pour lequel je me sentais une réelle sympathie, je repris autant que me l'ont permis mes nouvelles occupations, des études auxquelles n'ont d'ailleurs jamais manqué les bienveillants encouragements du Ministère des Affaires Etrangères.

Je n'ai pourtant pas pu tout voir, mais les quelques provinces que le défaut de temps et d'argent, car s'il en coûte pour voyager c'est surtout en Chine, et les provinces dis-je que le défaut de temps et d'argent m'ont empêché de visiter, ne me sont pas pour cela restées tout à fait inconnues;—des entretiens avec des Chinois originaires de ces provinces, contrôlés et confirmés par des

correspondances soigneusement entretenues avec mes amis les missionnaires, m'ont mis à même de suppléer jusqu'à un certain point à l'observation directe. Et à ce propos, qu'il me soit permis de citer ici en témoignage de juste reconnaissance les noms de Messieurs l'abbé Mihières qui voulût bien m'accompagner pendant un long voyage en Mongolie, l'abbé Vinçot qui ne voulût pas non plus me laisser seul pendant tout mon voyage dans les provinces occidentales, quoique cefût dans la saison la plus chaude et la plus pénible, l'abbé Perny, l'abbé Delamarre, enlevé il y a trois ans par une mort rapide à la science et à l'Apostolat,—de leurs Grandeurs,—Messeigneurs Faurie, Chauveau, Desfleches, Thomines-Desmazures, Verrolles, des missions Etrangères;—de Messieurs l'abbé Jeandard, l'abbé Tagliabue, l'abbé Anot et de leurs Grandeurs Messeigneurs Delaplace, Anouilh, Baldus et Mouilly, des missions Lazaristes;—de Messieurs l'abbé Tang, et l'abbé Tchang, et de leurs Grandeurs Messeigneurs Navarro et Zanolli des missions Franciscaines, enfin du P. D'Argy et des regrettés P. P. Lemaitre et Clavelain de la compagnie de Jesus.—Toutes leurs lettres respectueusement conservées forment de précieuses pièces justificatives dont quelques unes trouveront leurs places dans le cours d'un prochain travail.

Cependant, malgré tout, il n'est impossible de donner cette carte comme absolument correcte et il y a pour m'en empêcher une excellente raison que l'on comprendra tout de suite; c'est que c'est la première carte de ce genre qui ait été faite.

Elle recevra, je le sais d'avance et les appelle de tous mes désirs, de nombreuses modifications dont je tiendrai compte dans les autres éditions qui pourront en être faites; mais je crois pouvoir assurer aussi que ces modifications ne porteront guère que sur les limites extrêmes des cultures et non sur leurs centres, de sorte que les fautes qui peuvent y avoir été commises ne sont pas essentielles et n'entraîneront pas, on le voit, de graves conséquences.

Enfin quant aux critiques qui seraient tentées de pousser jusqu'à ces détails une rigoureuse sévérité je les prierai de considérer encore ce que je disais tout à l'heure; c'est la première carte agricole de la Chine.

L'idée m'en a paru devoir engendrer quelques bons résultats et cette conviction, non moins que mes antécédents m'ont semblé me faire un devoir de la mettre à exécution. D'autres viendront, si ce n'est moi-même, qui corrigeront cette carte mais il fallait commencer et je me suis dévoué.

Ce la dit, j'attends leurs censures et m'y soumetts d'avance; sans cesser d'être sévères je suis persuadé qu'elles seront bienveillantes.

II.

Les limites de la carte que nous avons sous les yeux sont indiquées au Nord par 39 degrés de longitude du 22^{ème}. Occidental au 16^{ème}. Oriental (Méridien de Pékin) et au Sud par 31 degrés du 18^{ème}. Occidental au 12^{ème}. Oriental, et par conséquent par les 44 et 18^{ème}. degrés latitude Nord, c'est-à-dire par 737 lieues de l'Est à l'Ouest et par 675 du Nord au Sud, comprenant une surface de 497,475 lieues carrées environ.

Il ne faut rien moins qu'une portion du globe aussi considérable, non pas précisément pour représenter la Chine elle même mais pour la faire comprendre et pour justifier chacune des observations dont elle peut être le sujet.

Quant à la Chine proprement dite elle s'inscrit entre le 43^{ème}. et le 20^{ème}. latitude et le 6^{ème}. 5' longitude Est, et le 17^{ème}. 5' longitude Ouest: encore faut il déduire de tout cet espace ainsi limité les surfaces occupées par la mer qui la baigne au Sud, et sur tout son flanc oriental, les grands plateaux sableux qui la dominent au Nord, et les hautes montagnes qui lui font obstacle à l'ouest, et l'aire propre de la Chine en y comprenant la Mandchourie ne sera plus environ que cinq fois ou cinq fois et demie celle de la France par exemple.

Tel est le champ soumis à nos considérations.

J'avais en commençant le tracé sur la carte, l'intention de n'y faire figurer que les cultures les plus importantes et de les y indiquer toutes; mais je ne tardai pas à reconnaître que, même en ne tenant compte que de ces cultures, le nombre en était si grand qu'il faudrait pour les représenter de façon à donner une idée à peu près exacte de leur répartitions sur le territoire de la Chine, une carte trois fois au moins plus grande que celle que nous avons sous les yeux.

Or, comme de telles dimensions l'auraient rendu impossible, je me résignai à avoir recours à plusieurs feuilles et à n'inscrire sur celle-ci que les cultures les plus générales et celles qui pouvaient le plus intéresser l'Europe; encore me fallût-il en doubler quelques unes, c'est-à-dire en représenter plusieurs par la même couleur.

Il est bien entendu que je ne me suis permis ce dédoublement que lorsque ces récoltes étant d'abord de même nature, se suivent et s'accompagnent partout et peuvent être regardées comme succédanées les unes des autres. Telles sont par exemple le sorgho et le millet, le blé et l'orge; c'est toutefois une défectuosité dont je ferai en sorte de purger la carte au moyen des feuilles qui pourront suivre la première, mais que je n'aurais pu éviter de prime abord qu'en séparant chaque culture, c'est-à-dire en transformant la carte en Atlas, ce qui ne répondait plus aux vues, que j'avais de présenter pour commencer un tableau aussi complet et aussi synoptique que possible de l'état agricole de la Chine et en quelque sorte de l'assolement général de cet Empire.

Il est vrai que la division des récoltes en cartes particulières aurait eu l'avantage très grand assurément d'en faciliter l'étude détaillée et de fournir même, en rendant possible une certaine combinaison des courbes, le moyen d'indiquer pour chacune les différents degrés d'intensité et de rendement; mais il n'est pas moins vrai non plus, que le rapprochement de toutes les récoltes sur une même carte provoque immédiatement et sans effort, par la seule vue, des observations d'un intérêt plus général, et il m'a semblé que cette considération devait primer les autres.

Je n'ai même qu'un regret, c'est encore une fois, de ne pas avoir pu tout inscrire sur la même feuille.

Nous avons ici sous les yeux quatorze récoltes, mais, quoique je me hâte de le dire, ce soit a peu près les principales; nous n'en avons que quatorze et la Chine en comprend *soixante dix*.

Qu'on les suppose un instant réunies, se croisant, se couvrant, se décuplant les unes des autres; l'esprit est presque effrayé de la masse énorme de population nécessaire soit pour les produire soit pour les consommer. Que l'on remarque de plus que certaines de ces récoltes sont cultivées jusqu'en des lieux où il semble le plus impossible qu'elles existent, comme le riz qui est produit jusqu'au sommet des montagnes, et que l'on songe aux efforts prodigieux qu'il a fallu accomplir pour les y amener; combien devaient être et sont impérieux les besoins qui les ont nécessités!

Faut il d'autres indices de la densité de la population, d'autres preuves des chiffres accusés par les recensements?

Que l'on remarque encore qu'aucune de ces soixante dix cultures n'est spécialement destinée à l'alimentation des animaux, que par conséquent sauf le petit nombre de ceux que l'herbe des chemins et des cimetières et les déchets de la consommation de l'homme

permet d'entretenir, toute force doit venir de l'homme, et que c'est de lui encore que la terre attend toute sa fécondité.

Remarquons enfin que la plupart de ces récoltes sont excessivement exigeantes : c'est le Thé dont il faut cueillir toute la feuille au moment précis et voulu, presque mathématique de sa croissance, avant qu'elle ne grandisse d'avantage.

C'est le riz qui demande tant de soin pendant 3 mois que presque partout où il abonde nous le voyons exclure les autres plantes. C'est la cire d'insectes dont les producteurs doivent être incessamment surveillés, protégés contre leurs innombrables ennemis, ramassés s'ils tombent au bout d'une aiguille de bois et remplacés sur leur nourriture. C'est le ver à soie, et quand ce n'est pas celui du mûrier, c'est celui du chêne, véritable enfant dont je n'ai pas besoin de rappeler tous les caprices.

En vérité, si une chose pouvait nous étonner dans les chiffres en question, ce serait qu'ils ne fussent pas vrais.

Cinq cent trente sept millions disent-ils ? C'est en effet possible et cependant c'est si écrasant que je comprends encore qu'on répugne pour ainsi dire à l'admettre.

Mettons donc quatre cents ;* mais il serait absolument impossible de dire moins.

Et maintenant reportons nous au chiffre de notre Commerce avec ces quatre cent millions d'hommes.

En 1864† il était de	498,410,886f.
pour l'exportation et de	466,336,992f.
pour l'importation soit en tout	964,747,878f.

si nous voulions savoir de combien ce commerce étranger affecte chaque Chinois nous trouverions un dividende de 2f. 30c. environ, ce qui est peu ; mais ce n'est pas de cela qu'il s'agit ; sur les 466,336,992f. d'importations il y a 63,135,612f. de lainages,

id	id	42,591,132f. de cotonnades,
id	id	187,535,160f. d'opium,
id	id	173,073,088f. divers, renfer-

mant pour une somme considérable des objets destinés à l'usage exclusif des Européens.

Laissons de côté les 187,000,000 d'opium retranchons encore 20,000,000, représentant soit les consommations Européennes,

* Un recensement fait en 1812 accusait 367 millions d'habitants.

† Voir Réflexions sur l'Etat actuel du Commerce Européen en Chine (1864.) G. Eug. Simon.

soit les réexportations et il nous restera une somme de 258,801,832 francs affectant utilement pour l'importation la population Chinoise.

Si nous convertissons à présent cette dernière somme en cotonnades à raison d'un prix moyen de 12f. la pièce, (il y a là deux grandes exagérations en faveur du commerce Européen) nous trouvons qu'elle représente un chiffre de 21,566,820 pièces environ.

Est-ce trop d'attribuer à un habitant une consommation annuelle de deux pièces, si ce n'est pas trop, onze millions huit cent mille habitants seulement prendraient part à nos importations, mais si nous voulions tenir compte des exagérations signalées, ce ne serait tout au plus que 7 à 8,000,000 soit 10,000,000 d'habitants. Or, la seule province du Kiang-Nan ou se trouve Shang-haï en compte 70,000,000. Encore ces 10,000,000 de consommateurs ne se trouvent-ils pas groupés, il a fallu aller les chercher, les solliciter presque, par l'ouverture de douze ou quatorze ports.

Voilà à quoi se borne l'influence du commerce Européen en Chine, et cela opérés deux cents ans pour le moins de tentatives et d'essais et trois ou quatre guerres plus ou moins couteuses.

Que conclure de ce qui précède, si ce n'est de deux choses l'une, et peut-être les deux, ou que la Chine est tellement organisée qu'elle ne ressent aucun besoin de notre commerce (sans cependant que l'on ait la ressource d'expliquer cette indifférence par l'absence de besoins, car la carte prouve précisément le contraire) ou que nos efforts ont été des plus maladroits puisqu'ils n'ont aboutés qu'à des résultats relativement aussi insignifiants.

Voilà une première observation : après le nombre et l'intensité des cultures, ce qui dans l'examen de la carte agricole de la Chine attire le plus l'attention, c'est la façon dont elles sont groupées, groupement qui résulte de leur distribution, ou en d'autres termes de leur assolement.

Qui dit assolement suppose loi, et si je me sers de ce mot, c'est qu'il est plus qu'évident que cette distribution n'est ni arbitraire ni fortuite; et si l'on pouvait en douter, il suffirait pour s'en convaincre de remarquer la division d'une même production en un nombre plus ou moins grand de foyers, la netteté avec laquelle ces foyers se separent souvent, soit à de longues, soit même à de courtes distances, l'empressement que certaines récoltes semblent mettre à se rechercher, l'accumulation de plusieurs sur un même point, &c. Toutes ces choses, encore une fois, ne sont pas évidemment sans raisons.

Ce n'est pas ici le lieu de les exposer. Il y a assolement, c'est tout ce qui nous importe et beaucoup de personnes penseront peut-être que j'aurais pu me dispenser de le montrer.

Il y a assolement, et cet assolement le plus riche que l'on puisse imaginer, des milliers d'années l'ont consacré. Il n'est donc pas seulement riche, il est à croire qu'il est aussi, bien entendu, sage. On pourrait dire que c'est le temps lui même qui l'a établi et rien n'est solide comme les constructions dont le temps se fait l'architecte. Dans tous les cas, si ce n'est pas le temps qui l'a édifié, il est sûr que le temps l'aurait détruit s'il avait été défectueux.

Ainsi nous sommes en présence d'un assolement riche et sage, c'est à dire le plus productif, le plus économique possible; et alors ne doit on pas user de la plus extrême circonspection pour engager le peuple Chinois à le répudier ou seulement à le modifier, car n'est ce pas le changer que d'augmenter le rôle de telle ou telle culture.

Ne peut on concevoir maintenant les répugnances qui lui font résister aux sollicitations étrangères. Il y a cédé quelquefois et il n'a eu qu'à s'en repentir. En 1863 par exemple, on avait engagé les cultivateurs du Tché-kiang à mettre le plus possible de terres en Coton et en 1864 les récoltes de plusieurs milliers d'hectares étaient abandonnées sur pied faute d'acheteurs. Un autre mécompte bien plus cruel attend les Chinois, dans peu d'années, quand les coteaux et les vallons de l'Himalaya pourront abreuver l'Angleterre.

Je suis bien loin de dire ou de penser qu'il n'y ait absolument rien de plus à espérer de notre commerce d'importation avec les Chinois; je voudrais seulement montrer que cette augmentation ne peut qu'avoir des limites très prochaines; qu'elle ne doit et ne peut être poursuivie que dans certaines localités, dans certaines circonstances particulières telles que celles que j'exposerai tout à l'heure en parlant de la Soie, mais que jamais elle ne comblera les désirs de ceux qui, supputant le petit nombre d'articles que nous fournit le peuple Chinois, voudraient du moins l'amener à ne produire que ceux là, ce qui leur procurerait par surcroît l'avantage de lui envoyer en échange tous ceux à la production des quels il aurait renoncé. C'est ainsi qu'on lui a demandé d'augmenter ses exportations de Coton, de Thé, de Soie, et qu'on leur demande maintenant d'augmenter celles du chanvre d'ortie, &c.

Je le répète : je suis loin de croire que rien absolument de ce qu'on lui demande n'est possible, mais à la condition que ce qu'on lui demande ne troublera pas l'économie de sa production, et, sans former de jugement téméraire, je crois que c'est de quoi l'on s'inquiète assez peu.

D'ailleurs en supposant accomplis les désirs les plus ambitieux, ne se trouverait-on pas en face de résultats bien différents de ceux que l'on espère ?

Admettons en effet que toute la Chine puisse être cultivée en Thé, et le soit en effet, comme trois mois au plus de travail dans toute l'année suffisent à la culture de cette plante, ceuillette comprise ; pense-t-on que les Chinois n'en demanderaient pas un prix qui pût les faire vivre pendant toute l'année, et l'Angleterre consentirait-elle à payer des ouvriers ainsi inoccupés. Mais les conséquences en seraient bien autrement désastreuses ; cette longue oisiveté ferait perdre le goût et l'habitude du travail, et produit et producteur auraient bientôt disparu.

C'est au contraire le nombre, la variété et la proportion de ses cultures qui sauvent et retiennent le Chinois, et qui, lui permettant de demander le salaire de sa journée à plusieurs maîtres, lui donnent la possibilité d'en vendre les produits à un prix qui nous permet à notre tour d'en aborder quelques uns.

Déjà la terre lui manque, ne serait-il pas de la plus stricte prudence de ne lui rien faire perdre de ce qui l'y attache encore, de peur que, sans travail chez lui, il ne vienne en réclamer chez nous ou simplement en échange de nos produits et en vertu des mêmes principes dont nous voulons nous prévaloir chez lui, offrir ses bras à nos manufacturiers et à nos agriculteurs à un prix auquel lui seul peut-être, dans le monde, est capable de les offrir.

C'est ce qu'il serait peut-être difficile de resoudre. J'ai parlé déjà en d'autres occasions des difficultés, des inconvénients et même des dangers que pourrait présenter l'introduction en Chine de certains de nos engins modernes, telle que la locomotive et en général les machines, me fondant sur l'impossibilité où seraient ses habitants refoulés d'industrie en industrie et de plus en plus acculés de recourir au travail de la terre déjà trop occupée. Je ne répéterai pas ce que j'ai dit à ce sujet, ni du peu de chances de succès qu'auraient ces engins dans un pays sillonné comme la Chine, d'innombrables cours d'eau de toutes sortes au moyen desquels les transports s'obtiennent à très peu de frais, payés qu'ils sont déjà pour ainsi dire, par les services de ces mêmes canaux

employés aux irrigations. Ce sont encore des considérations que la vue de la carte ne peut que soulever et appuyer.

Je ne reviendrai pas non plus sur l'absence ou du moins l'insuffisance des animaux, si rares que l'on peut préjuger que bien peu de ceux qui existent peuvent être sacrifiés à la boucherie; je ne reviendrai pas, dis-je sur cette question, que pour suggérer l'idée de tenter d'importer en Chine les viandes si bien préparées et séchées des différentes contrées de l'Amérique où les animaux n'ont presque de valeur que celle de leurs peaux et ne coûtent que la peine de les tuer, de telle sorte que la viande en est vendue à un prix très bas. Un pareil essai ne serait pas seulement une bonne œuvre et un service rendu aux Chinois, mais encore, s'il en était ainsi, apprécié, la source d'immenses opérations.

J'ai dit aussi dans une notice spéciale le succès que l'on pourrait attendre d'une introduction plus large des lainages, si l'on pouvait les céder à un prix inférieur à celui que l'on en demande encore aujourd'hui.

J'exprimais tout à l'heure quelque appréhensions des conséquences qu'amènerait peut-être pour la Chine la suppression ou une diminution notable de l'emploi des bras dans l'une quelconques de ses cultures ou de ses industries.

Voici au Nord Est, dans la province de Chan-Tong, une asterique noire qui prouve que cette apprehension pourrait n'être pas sans fondement. Cette asterique indique la place, que je n'ai pu limiter faute de renseignements exacts sur l'état actuel du fleau qu'elle signale, d'où est sortie la rébellion des Nien-Fei qui désole la Chine en ce moment. C'était il y a vingt ans encore, une des contrées les plus riches de la riche province du Chan-Tong, on peut en juger par les cultures voisines; mais il y a vingt ans environ le fleuve jaune qui jusqu'à avait été, sauf de rares et terribles exceptions maîtrisé par des soins et des travaux assidus, et auquel le Canal Impérial bien entretenu ouvrait une large saignée en le mettant en communication avec le Yang-Tsé-Kiang; le fleuve jaune abandonné à lui même par l'incurie de la dynastie actuelle, commença à sortir régulièrement de son lit et à couvrir de plus en plus la contrée environnante de sable et de limon. Il y a vingt que le mal a commencé et depuis les champs et les maisons ont disparu et les habitants errent par toute la Chine demandant au pillage le pain que la terre ne leur donne plus chez eux et qu'elle ne saurait leur offrir ailleurs. Et le fleau n'est pas resté localisé, son influence, s'exerce sur la plus grande

partie de la province dont la population trop voisine des pillards, a abandonné ses champs encore verts pour se joindre a eux et devenir pillarde de pillée qu'elle était.

Nous apercevons encore vers le Sud et à l'Est deux taches presque blanches à peine sillonnée de quelques lignes indiquant la première du Sorgho et des pâturages. Ce sont à peu près les seules exceptions à l'agriculture de la Chine. Ces localités sont habitées par les seuls aborigènes qui aient résisté à l'invasion de la civilisation Chinoise.

Ils vivent là parfaitement tranquilles, adonnés à l'entretien de quelques troupeaux, à la fabrication grossière de quelques tissus de laine et à la Chasse.

Je les ai vus au Se-Tchuen venir paisiblement échanger dans les marchés leur rares produits, la chevelure entière et longue, couverts d'une sorte d'étoffe de laine extrêmement grossière. Toute fois ces demi sauvages ne sont pas toujours aussi honnêtes et quand le besoin les presse, ils sortent de leurs montagnes par troupes de vingt ou trente et tombent à l'improviste sur les villages; c'est toutefois le seul cas où les autorités Chinoises en ordonnent la poursuite et la punition mais elles n'exercent pas de représailles.

Du reste on peut déjà prévoir le temps où ces pauvres tribus se convertiront à la vie civilisée, déjà leur système pastoral n'est plus aussi exclusif et ils commencent à admettre quelques grains et quelques légumes.

Telles sont les premières et les plus générales observations que suggère un premier coup d'œil sur la carte agricole de la Chine; c'est à celle là que je me bornerai pour aujourd'hui, sauf à recourir à cette carte, quand j'aurai l'occasion d'exposer de nouvelles réflexions.

Je passe maintenant à l'examen particulier de chacune des cultures comprises dans la première feuille, examen auquel d'ailleurs suffira un tableau indiquant quelques chiffres que je ne retarderai qu'afin de donner une légère esquisse des raisonnements dont ils peuvent être l'objet.

Cinq grandes cultures figurées par les couleurs vert bouteille—brune—rouge brique—vert foncé, et vert clair fixent d'abord l'attention par le développement qu'elles atteignent et l'espace qu'elles circonscrivent. Sauf une seule, la zone verte, elles ne sont point entièrement distinctes ni séparées les unes des autres et ne se précisent à l'œil sur la carte que par l'intimité à laquelle elles

atteignent par le rapprochement des lignes qui les constituent, ce qui établit un certain nombre de foyers dont les derniers rayons vont s'écartant de plus en plus. Puis, sur ce fond général, et parsemé sans ordre apparent, se détachent plusieurs autres foyers plus petits, de tons plus vifs qui donnent naissance à d'autres zones.

Malgré cette apparente confusion il est cependant aisé de voir que, du moins pour quatre des cinq grandes cultures dont il a d'abord été question, leurs foyers affectent des zones spéciales et assez bien tranchées.

Ainsi la couleur verte, réfugiée au Nord, ne se mêle point aux autres. Les foyers rouges restent presque tous dans son voisinage; viennent ensuite les foyers vert foncé qui s'étendent presque sur une seule même ligne de l'Est à l'Ouest, et enfin les foyers bruns qui occupent les parties les plus méridionales.

La première représente les Pâturages; la seconde le Sorgho, le Millet et le Maïs; la troisième le Blé, l'Orge, et le Seigle, la quatrième le Riz, et quant à la couleur violette qui représente le coton on ne lui voit aucune place particulière et elle semble se mêler et se tisser indifféremment avec les autres.

Nous aurons donc quatre zones ou quatre régions principales; celles des Pâturages, celle du Sorgho, celle du Blé et celle du Riz.

Chacune d'elles peut servir de base à des appréciations intéressantes. Veut-on se faire une idée de leurs populations, de la possibilité d'exportation de leurs produits, du chiffre de cette exportation? Mesurons les surfaces que couvrent chacune des cultures de ces régions, multiplions ces surfaces par le rendement moyen de chaque culture, soit d'après des chiffres spéciaux, soit même d'après les connaissances que nous aurons apportées d'Europe, additionnons toutes ces valeurs qui représentent ces rendements d'après des chiffres donnés, connus; convertissons ensuite cette somme totale en blé, riz ou sorgho, nécessaire à la nourriture d'un homme. Les quotients, en supposant qu'il n'y ait pas d'exportation, nous donneront assez approximativement la population totale et pour chaque région.

Mais y a-t-il exportation et de combien peut-elle être?

Nous avons vu qu'il n'y avait pas d'animaux de travail.*

* Cette négation est on le sent, trop absolue. Il est difficile d'admettre qu'il n'y ait pas dans un grand pays, aucun grand animal, aucun cheval, aucun bœuf: mais on sent aussi qu'avec les cultures que l'on a sous les yeux,

Or, combien d'hommes faut il donc pour cultiver les espaces que nous avons mesurés ! Combien pour les fumer ?

Ceux là, du moins, sont indispensables, et ainsi nous aurons non seulement un chiffre minimum de population mais aussi la quantité maximum de riz, blé, sorgho devenus les représentants des autres produits, rigoureusement exportable.

Ces deux opérations faites nous en déduirons un résultat moyen que nous devons corriger par la réflexion.

Ainsi nous n'avons que le chiffre de la population agricole strictement nécessaire, mais nous savons qu'une population agricole ne peut pas exister seule. Il faut qu'il y en ait une autre qui fosse pour elle ce qu'elle n'a pas le temps de faire, qui transforme ses produits, il en faut une troisième qui aille les demander à la première et les porter à la seconde, il en faut une quatrième qui les protège et une cinquième qui les administre et les gouverne &c.

Qu'elles sont d'ordinaire les proportions entre celles-ci et la première ?

Ce sera autant à lui ajouter et autant à déduire de l'exportation.

Notons cependant qu'une cause possible d'erreur vient de se glisser parmi nos éléments de calcul. Nous avons parlé de la part de la population nécessaire à la protection et nous l'avons déduite de proportions prises en d'autres pays. Mais d'après la carte, il est patent que la Chine n'est pas dans les mêmes conditions que les autres pays. Autour d'elle point de bornes conventionnelles, rien par conséquent qui soit sujet à interprétation et à contestation, la mer, le désert et, du côté du monde, de hauts et multiples remparts naturels, les chaînes du Thibet. La protection ne sera donc qu'intérieure et comme sa population est agricole, c'est-à-dire, nécessairement laborieuse et tranquille, cette population ne comportera guère qu'une gendarmerie.

Cette restriction faite, nous ne pourrions pas assurément conclure de ce qui précède des chiffres précis sur la population la valeur de la production, l'exportation, l'armée, &c. mais du moins nous pourrions nous en faire une première idée approximative; et,

le nombre de ces animaux en est fort réduit tout juste à ce que l'on pourra nourrir avec l'herbe qui croît le long des chemins, dans les émetières, avec les déchets de légumes &c. Ces animaux sont surtout des animaux de travail; ce sont ceux dont les services sont les plus indispensables. De plus si l'on fait attention que la culture principale de la Chine est le riz, c'est-à-dire une culture marécageuse, l'espèce animale qui devra dominer est celle qui vit le mieux dans les marais, ce sera le Buffle.

en n'oubliant pas que ces chiffres devront être au dessous de la réalité puisque le riz, le blé et le sorgho. ont seuls servi à nos raisonnements, tandis qu'il y a d'autres cultures plus riches réclamant plus de bras, satisfaisant et indiquant plus de besoins, nous aurons du moins de quoi nous former un premier aperçu sur les *possibilités* du pays en population en produits en commerce, &c.

Je ne puis indiquer ici que la marche des opérations; les opérations elles mêmes m'entraîneraient beaucoup trop loin. Ensuite les résultats prendraient nécessairement une forme trop précise, et je ne pretends pas encore une fois ici qu'à des aperçus.

Mais si l'on voulait des données exactes pour la Chine, on les trouvera dans le travail prochain dont j'ai déjà parlé.

TABLEAU DE LA DISTRIBUTION DES RÉCOLTES EN CHINE D'APRÈS LA PREMIÈRE

FEUILLE DE LA CARTE AGRICOLE GÉNÉRALE.

RÉGIONS.	VALEUR DE LA TERRE DANS CHAQUE RÉGION. En supposant que la récolte principale soit la seule cultivée.	RENDEMENT MOYEN ET QUANTITÉ.	RÉCOLTES OU PRODUITS DE LA RÉGION.	CENTRES DE PRODUCTION PRINCIPAUX.	VALEURS DES PRODUITS DANS LES CENTRES AU MOMENT DE LA RÉCOLTE.	VALEUR DES PRODUITS À SHANG-HAI.	OBSERVATIONS.
PÂTURAGES.	Hectare	Hectare	Bœuf Chameau Cheval Chevre Mouton Yerck Sorgho Millet Maïs Coton	Mongolie et Thibet id id id id id Une lisière d'environ 10 lieues en dehors de la grande muraille plus haut en Mandchourie.	15 à 40 f. 80 à 200 f. 18 à 50 f. 4 à 6 f. 4 à 6 f. 25 à 40 f.	160 à 240 f. — 200 à 250 f. 15 à 18 f. 25 à 30 f. —	La terre en Mongolie est la propriété de quelques Princes qui ne peuvent la vendre. Cependant comme en général leurs revenus sont assez faibles; ceux qui sont propriétaires des terres voisines de la grande muraille ou les Chinois qui ont commencé à y émigrer, il y a une certaine d'années, sont en grand nombre aujourd'hui, ils éludent la défense et louent à très longs termes à leurs voisins à raison de 50 à 60 francs l'hectare, et même moins, selon les avances que le Chinois est disposé à lui faire.
SORGHO.	Hectare 1,600 à 3,000 f.	Hectare 4,000 à 5,000 k.	Sorgho Millet Maïs Coton en grains Blé Orge Seigle Soie de Chine Riz	Mandchourie Petcheli Chan-Si (Nord) Chen-Si (Nord) Kan-Sou	9 à 10 f. les 60 k. 14 à 15 f. id 8 à 9 f. id		Ces différences dans les prix du blé s'expliquent ainsi. Dans les centres de production spéciaux, comme au Ho-Nan, le blé est la nourriture ordinaire des habitants, à Shang-Hai c'est le riz, et le blé n'est demandé que lorsque le riz ne suffit plus; alors le prix du blé dépasse souvent celui des lieux où il est le plus récolté.
BLÉ.	Hectare 2,400 à 5,500 f.	Hectare 2,000 à 2,500 et 3,000 k.	Blé Orge Seigle Coton Soie du Mûrier Soie du Mûrier Ordinaire Soie de l'ailante Vernis Cire d'insectes Chanvre d'ortie Sorgho Millet Maïs Thé Riz	Ho-Nan Hou-Pé Chan-Si (Sud) Chen-Si (Sud) Chan-Tong (Ouest) Se-Tchuen (Nord) Se-Tchuen (Est) Chan-Si Chan-Tong Se-Tchuen (Nord) Chan-Tong Chan-Tong Se-Tchuen, Chen-Si, Chan-Si et Chan-Tong. Se-Tchuen, Ho-Nan et Chan-Si. Chan-Si et Chen-Si	10 à 11 f. 8 à 9 f. 8 à 9 f. 35 à 40 f. 2,000 à 2,500 f. 950 à 1,200 f. 350 à 400 f. 140 à 150 f. 56 à 64 f.	9 à 14 f. 10 à 11 f. 30 à 36 f. Trop variable pour être indiquée. N'est pas encore courante. Même note. 280 f. 100 à 110 f.	Cette différence dans la valeur d'un produit aussi demandé vient de ce que la soie produite dans cette région est plus mal filée que dans les autres régions, il n'y en a qu'une très petite quantité qui soit achetée par les Européens et qui atteigne alors au prix ordinaire. La valeur de ce produit a presque triplé depuis cinq ans.
RIZ.	Hectare 1ère. qté. 6,000 à 6,500 f. 2ème. qté. 4,000 à 5,000 f. 3ème. qté. 2,000 à 2,300 f.	Hectare 3,500 à 4,500 k. 2,500 à 3,000 k. 1,800 à 2,300 k.	Riz sans paille Thé Chanvre d'ortie Soie de Chine Cire d'insectes en 1863 Vernis Coton en grains Sorgho Blé Millet Maïs Orge Sucre Soie ordinaire Soie ordinaire	Ho-Nan Kiang-Si Kiang-Sou Se-Tchuen Fo-Kien Tché-Kiang Kiang-Si Hou-Nan Yu-Nan Se-Tchuen Kiang-Sou Kiang-Sou Ngan-Hoi Hou-Pé Se-Tchuen Se-Tchuen Konang Si Hou-Nan, Ngan-Hoi et Konang-Tong Fo-Kien blanc Fo-Kien jaune Se-Tchuen blanc Se-Tchuen jaune Kiang-Sou et Tché-Kiang Kiang Se-Tchuen Hou-Pé Yu-Nan Konang-Tong	11 à 12 f. les 60 k. 10 à 11 f. id 11 à 12 f. id 10 à 11 f. id 200 à 240 f. 36 à 64 f. 950 à 1,200 f. 200 à 250 f. en 1863 30 à 36 f. 43 à 48 f. 27 à 28 f. 38 à 40 f. 20 à 22 f. 2,500 à 2,800 f. 1,900 à 2,400 f.	 100 à 110 f. 400 à 430 f. 55 à 60 f. *	On a payé en 1863 le riz au Kiang-Si et au Se-Tchuen à 7 et 8 francs. On le voit souvent monter à 18 et 24 francs au Kiang-Sou et au Tché-Kiang. Qualités ordinaires. * A Ning-Po il vaut déjà 44 à 46 francs. † La quantité de Soie produite au Se-Tchuen pourrait être d'une année à l'autre portée au double. Elle était il y a 12 ou 15 ans de 30,000 balles, elle est descendue à 16 à 18 chiffre auquel elle était en 1863 par suite de la rébellion des Tai-pings qui interceptant le fleuve, empêchaient les communications entre cette province et celles où les plus belles Soies venaient se faire fabriquer, le Tché-Kiang, ce qui rendait les transports plus longs et plus coûteux. Mais ces obstacles n'avaient pas été arrachés. Il est probable même que depuis deux ans l'éducation du ver à Soie y a repris un nouvel essor. Les vers à Soie en Chine sont sujets comme partout à bien des maladies, mais comme les éducations sont en petit nombre, elles ne peuvent être plus soignées et les maladies ne font que s'accroître. La culture de la soie n'y a pas été rendue plus profitable par la cause d'immunité pour les Chinois vient de la rébellion des Tai-pings, qui ont de renouveler leur graines au moins chaque année, et pour les Tai-pings, et pour le Tché-Kiang à Tsi-Sih-Hien et à Hin-Hiang.

CARTE AGRICOLE DE LA CHINE.

PREMIÈRE FEUILLE .

REPERTOIRE

MÉRIDIEN DE PÉKIN.

Les points indiquent les centres des cultures, dont les lignes sont les limites.

Les autres feuilles comprendront.

L O N G I T U D E S

19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 1 2 3 4 5 6 7 8

- Pâturages 1

Millet
Sorgho 2
Maïs

Orge
Blé 3
Seigle

Riz 4

Coton 5

Chanvre d'ortie (China-grass) 6 + + + +

Thé 7 + + + +

Soie du Mûrier 8 + + + +

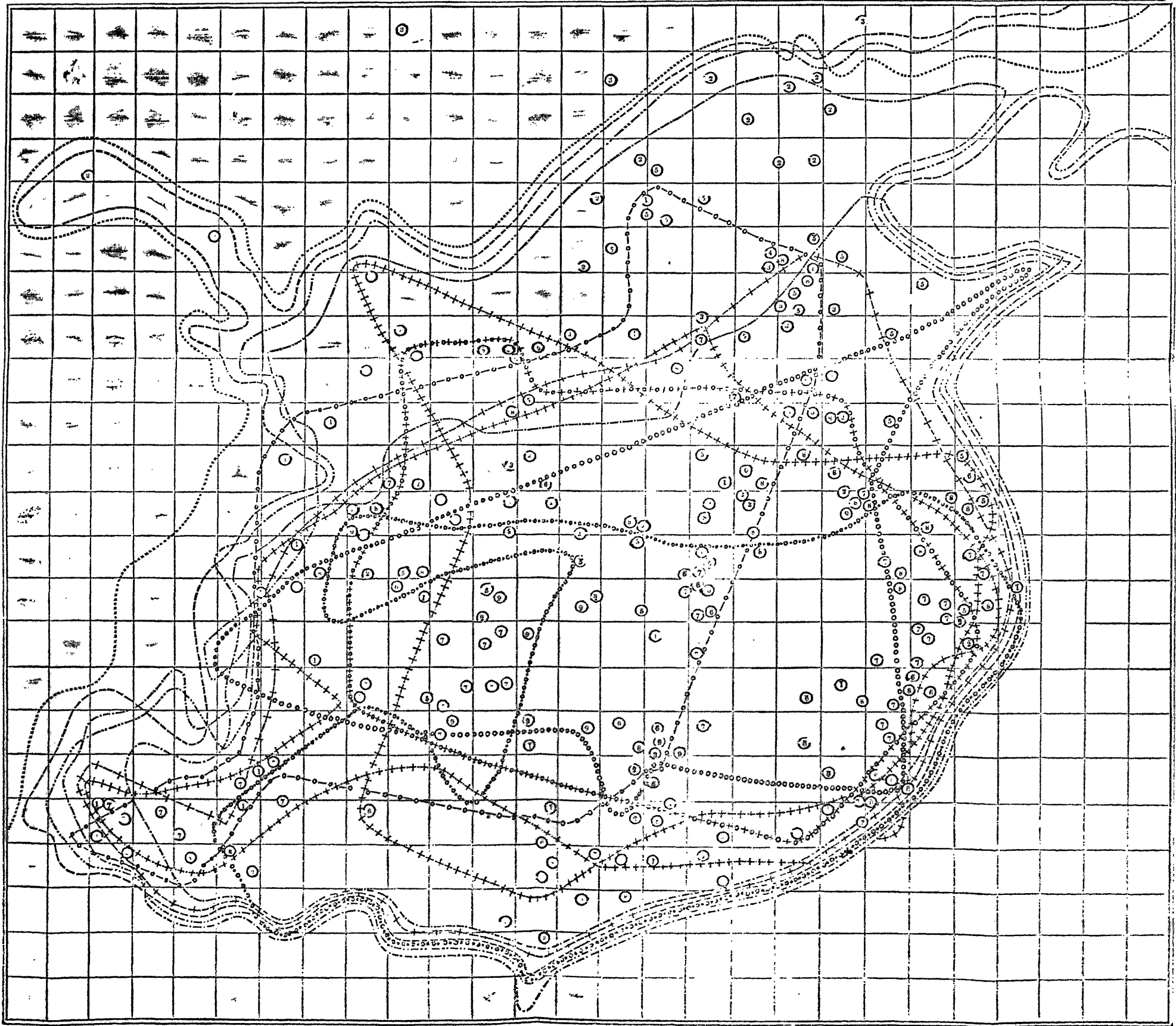
Cire d'insectes 9

Canne à Sucre 0

Soie de Chêne et autres 1

Vernis 2 + + + +

L A T I T U D E S



- Avoine Prunier
Blé de Printemps Pigne
Sarrazin Bananier
Haricots Luzerne
Pois Courges
Fèves Betteraves
Lentilles Carottes
Arachide Navets
Sésame Aubergines
Colza Raves
Ricin Choux
Soye d'Alantie
Cire d'abeilles Ignames
Opium, (prohibée depuis 18 mois).....
Chanvre, ordinaire
Tabac Caba
Forêts, (redaites à deux).....
Plantations Forestières
Bambou Taro
Palmier, (à chauvre)
Azerollier Pomme de terre
Abricotier Chastaigne d'eau
Oranger Nénuphar
Citronnier Carthame
Li-tchi Indigo
Noyer Vert de Chine.....
Jujubier Gingembre
Kaki Cannelle.....
Néflier Champignons
Poirier Rhubarbe
Pêcher Josse à Chandelle

ARTICLE XI.

CHINESE NOTIONS ABOUT PIGEONS AND DOVES.

BY T. WATTERS, Esq.

M. REMUSAT, as quoted by Sir J. Davis¹ who agrees in the opinion, gives the Chinese a moderate amount of praise for their achievements in the field of Natural History; and he regards their language as well adapted by its nature for being the record of scientific classification. Others, however, have entered on the study of Chinese works on Natural History and have found in them little of scientific or social value. Even the particular work which Remusat analysed and on which he based his statements shows Dr. Williams how little the class of works to which it belongs will reward the perusal.² So also Mr. Swinhoe observes with respect to the Zoological section of the official account of the Prefecture of Taiwan, which he had translated and annotated. "As regards myself, I have found a certain benefit to accrue, for I have learned that there are still several animals in the island, with which I am unacquainted, and I have been able to bring to light from this Chinese work, several facts and remarks which will much interest scientific men at home. Regarding, however, the Chinese work from a scientific point of view, it will be found to fall very far short of what might be expected in a book comprising as it pretends to do the entire statistics of Formosa. The notices of the animals are short and incomplete, and sometimes so imperfect as to render it almost impossible to detect what creatures are intended," &c.³ In order to form an opinion for myself on this subject, I devoted a considerable amount of time to the study of the teachings of the Chinese concerning one family of birds, viz:—the Columbidae or pigeons. This study has been very unsatisfactory, partly through want of opportunities, and partly from apparently conflicting and meagre accounts of birds given by Chinese writers, and the impossible nature of many of their remarks. Such as it is, however, I now submit the result of my investigations to the students of China and the Chinese.

The word *chiu* 鳩 corresponds loosely to the term *Columbidæ*, including in its most general sense all doves and pigeons, though Dr. Williams⁴ makes *ko* 鴿, a pigeon, the name of the family. In his "English and Chinese Vocabulary" the same scholar gives *ko* as the equivalent of dove, and *pan-kiu* (*i. e. pan-chiu*) 班鳩 as the equivalent of pigeon; while Chalmers in his Canton Vocabulary makes *kop* (*i. e. ko*) and *pan-kiu* the equivalents of dove. In the Amoy dialect the dove is called *ka-tswi* 交鴿 and the pigeon *chiu-ah*, though *pan-kap* (*i. e. pan-chiu*) is also used. The Shuo-wen 說文 and the Ko-wu-lun 格物論 make the *ko* 鴿 a class under the *chiu*; but in other Chinese writings I do not find either the *chiu* made subordinate to the *ko* or *vice versa*. In these there are three great classes, the *pan-chiu* 班鳩, the *shi-chiu* 鴟鳩, and the *ko* 鴿, that is, turtles, wood doves, and pigeons. For convenience sake, however, I shall divide all the birds included under the term *chiu* into 1st *ko* or pigeons, chiefly domestic, and 2nd the *chiu* proper or doves.

I.

THE KO-TZŪ 鴿子 OR PIGEONS.

The class Birds is divided by the Chinese into four great departments, water birds, land birds, forest birds and hill birds.⁵ The pigeons are included in the list of land birds along with partridges, quails, bats, &c.

A synonym for *ko-tzū* is *po-ko* 鸚鴿 which is supposed to imitate the cooing of the pigeons. The carriers are called *fei-nu* 飛奴, flying slaves. This name is said to have originated with the Emperor Ming 明 of the T'ang dynasty.⁶ Another account, however, makes a Chang-chiu-ling 張九齡 to have been the first to use this name.⁷ He lived during the reign of the above Ming, the third of the dynasty, under whom he held a high office. The pigeons which fly about with whistles attached to them are called *pan-t'ien-chiao-jen* 半天嬌人, mid sky charming girls.⁸ The Pên-ts'ao or Chinese Herbal gives also the name used in the Sanscrit writings for pigeon as *chia-pu-te-chia* (*i. e. ka-pu-te-ka*) in old Chinese 迦布得迦 and intended for *kapota* कपोत.

Pigeons are said to be of various colours as azure, white, black, green and mottled. The eyes are in some large, in others small, and they are yellow, vermilion or green in colour.⁹ Though of

general distribution neither these birds nor doves are to be found in the capital of Kansuh.⁸ The existence of pigeons in a wild state is also noticed, but I find little said about them distinctively.

The Chinese regard these birds as very libidinous, especially hens, which they represent as acting towards the cocks in a very unhenlike manner.⁹ They are supposed to breed every month, but the number of eggs laid at a time is not stated. It is supposed that the dove and the pigeon breed together,⁹ though, of course, no evidence of the fact is adduced. Their amorous disposition accounts for this as also for the facility with which pigeons themselves can be made to live together. They are also supposed to remember for a long period their original home, and to be able to return to it from a great distance.⁸ This fact is alluded to in a beautiful little ode to the white pigeon by Hsü-yü 徐寅 of Tah-chien, who represents the gull 鷗, unable to find her way back to her home, think sadly of her dear native river, on seeing the pigeon which she knows can fly back to her home. Another writer alludes to the custom of persons going voyages in ships and boats sending back pigeons for long distances to announce to friends at home that all was well.

It is perhaps not unworthy of notice here that the pigeon was one of the six sorts of wild birds which the emperor's butcher had to furnish for the imperial table and for sacrifice, during the Chow dynasty. The other five were the wild goose, the quail, the partridge (or rail (?) Biot), the pheasant and the dove.

Among the various kinds of pigeon the white one seems to be the favourite with the Chinese, and they regard it as the only one having medicinal value. Its flesh is said to be saltish and without poison, and to neither heat nor cool the blood. This last peculiarity is expressed by the word *p'ing* 平 i. e. evenly balanced or in due proportions. It dispels the noxious effects of any drug and summarily cures the itch even when of long duration. With this one may compare what Bacon says in his "*Historia Vitæ et Mortis*:"—"It is a common practice in extreme and desperate diseases to cut pigeons in two, and apply them one after another to the soles of the feet of the sick man. This sometimes gives wonderful relief, which is commonly imputed to their *extracting the malignity* of the disease. But in some way or other this treatment affects the head and comforts the animal spirits."

Pigeon's flesh is also useful in adjusting the seminal secretions, increasing the animal spirits, and healing several cutaneous affec-

tions, but, though thus beneficial to man, if taken in large quantities there is danger of it losing its medicinal value. It is also said to take away one's thirst for drinking water, and to dispel the poison of the small-pox pustules. If one cook the flesh of the white pigeon and give it to a child to eat, washing also his body with a decoction of the bird's feathers, very few small-pox pustules will come out on the child.

The blood of these birds dispels the poisonous influences of all noxious worms.

The eggs are an antidote to the injurious effects of boils and small-pox. If a person when young eat these eggs he will never have small-pox, or, if he have, the pustules that will appear will be few in number. The following is the course to pursue in order to obtain this effect. Take two eggs of the white pigeon and hermetically seal them in a bamboo tube, putting the whole in the middle of the privy. Allow it to stay there for half-a-moon, then take it out, mix the whites of the eggs with three ounces of *shen-sha* 沉砂, ether sand, a very fine red sand-like substance; make this compound into pills of the size of a green pea, taking 30 of these for a dose, and repeating the dose three times. After this delightful preparation has been thus taken by the patient, he will find the poisonous matter escaping rapidly by stool and urine.

The excrement of the white pigeon is also a medicine, its name being *tso-p'an-lung* 左盤龍, left-coiling dragon, so called because on falling it coils from right to left. That of the wild pigeon is the more highly esteemed. It is pungent, warm, and slightly poisonous. If roasted and pounded, and then applied to ulcerous sores on men or horses it will effect a cure; and it may also be mixed in the fodder for mules and horses to be taken internally. It removes swellings, acts as an aperient, and is of great service in uterine affections. When roast to a cinder and soaked in wine, it forms a cure for cold in the breast, and there are several other afflictions in which it is very useful. Now with these remarks on the qualities of the white pigeon's excrement we may compare what the Knight of Norwich has written on the same subject:—"The temper of their (*i. e.* pigeon's) dung and intestinal excretions do also confirm, which topically applied becomes a *phœnigmus* or rubifying medicine, and are of such fiery parts, that, as we read in Galen, they have of themselves conceived fire, and burnt a house about them."¹³

I do not know whether Chinese writers have ever questioned the existence of gall in pigeons, but from the general silence of their works on the matter I am induced to believe that they did not consider these birds possess any gall. I cannot speak with any degree of certainty, however, as I have not examined a sufficient number of their writings.

II.

THE CHIU 鳩 OR DOVES.

This is the first of the seventeen kinds of birds enumerated under the category of forest birds in the Pên-ts'ao, crows, magpies, jays, &c. coming under the same category. The generic name there given is *pan-chiu* 班鳩 and this is the ordinary name for a dove. But, indeed, the names which the Chinese have for these birds are very numerous and not easy of distinction, especially to one not versed in ornithology. I shall endeavour, however, to give as many of them as are to be found in their books together with notices of their habits and qualities.

1. The *pan-chiu* 班鳩. This is properly the Chinese turtle dove, but the name is by no means strictly confined to this species. The word *pan* means spotted or variegated, and a synonym for *pan-chiu* in respect of plumage is *chin-chiu* 錦鳩 or embroidered dove.¹ Other synonyms are *pu-chiu* 萼鳩 or rather *pu-kiu*, the old pronunciation of 鳩 being *kiu*; and *chou-chiu* 祝鳩 the prayer dove, so called because in early times it was used in the Imperial sacrifices.

2. The *shī-chiu* 鵽鳩 which Dr. Williams translates "the wood pigeon. Other names for it are *pu-ku* 布穀, *chia-ch'ü* (i.e. *ha-k'ü*) 鶡鵒, *hu-ku* 獲穀, *po-ku* 撥穀, and *kuo-kung* 郭公. Li-shī-chên 李時珍, the last editor of the Pên-ts'ao, under the Ming dynasty says that these names are imitative of the note of the bird; but other writers, as will be seen, give a different account of them. *Hu-ku* is a name used in Hunan; *po-ku*, in the north; and in other places it is called *sang-chiu* 桑鳩 or mulberry dove. Another equivalent for *shī-chiu* is *tai-shêng* 戴勝 or *shêng* wearer, the *shêng* being a pretty head ornament worn by females; and similar to this last name is another *tai-jen* 戴鵲 from a similar reason. The last two names are, however, apparently intended for the Hoopoe; and the picture of the *tai-jen* given in

the illustrations of the *Urh-ya* is evidently intended for that bird.

3. The *pai-chiu* 白鳩 or white dove.

Mr. Swinhoe in his comments on this name in the chapter of the Official Account of the Prefecture of Taiwan, makes the bird to be an albino of the *Turtur risorius* of India and other places. As such it is well known to foreigners as the Pescadore dove, most of the specimens offered for sale having been brought from the Pescadore Islands where they are kept in confinement by the Chinese. In other books, however, the white dove usually appears as in a free state.

4. The *huo-chiu* 火鳩 fire dove.

This bird Mr. Swinhoe calls the *Turtur humilis*. I have not found it in any other work except this Formosan book.

5. The *chin-chiu* 金鳩, or as it is called in the Amoy dialect *kim-ha-tsiu* 金鸚鵡 gold dove.

According to Swinhoe this is the beautiful little gold-and-green dove of south Formosa—the *Chalcophaps formosana*. The same remark applies to this bird as to No. 4, as to places where it is mentioned.

6. The *li-chiu* 綠鳩 or green dove.

This is the name of a *Treronine* dove of Formosa, but I do not know that it occurs on the mainland.

Ku-chiu 鵓鳩 is another name for a dove for which *ku-chou* 鵓 is also used.² This bird is said to come in the spring and go in the autumn, but I do not think it is a dove at all.

Those which are small and without spots or ornament are called by various names such as *kuei* 鷓, a word which Kanghsi's dictionary explains by "a dove" (*chiu* 鳩): *ching chiu* 荊鳩 and *ts'u-chiu* 楚鳩 meaning thorn bush dove.

Special names are also set apart for the young ones—thus they are called *ju-chiu* 鴉鳩, suckling doves; *k'ang-chiu* 糠鳩, tiny dove; *lang-kao* 郎巢, *ki-kao* 辟巢, &c.

In addition to the above there are several birds to which the name *chiu* 鳩 is applied, but apparently with less reason, if with any reason whatever. 1st. There is the *chü-chiu* 睢鳩 which is said in one place³ to be of the duck family, and in another book is referred to the sea eagles⁴ 鷗. It is mentioned in the beginning of the *Shi-ching*, and the context shows that the bird mentioned is a water bird. Another name for it is *wang-chü* 王睢.

2nd. There is the *mêng-chiu* 蒙鳩 or tiny dove. The philosopher Seun-tze 荀子 in the chapter of his work which is

headed Chüan Hsiao 勸學 or Exhortation to learn, says:—"In the southern regions there is a bird named *mêng-chiu*, which uses feathers to make its nest, binding them together by hairs, and fastening the whole on reeds. When the wind blows, the reeds are bent down, the eggs broken, and the young ones die." This tiny dove is said by one author to be the same bird as the *ch'iao-liao*⁵ 鷦鷯 or *t'ao-chung* 桃蟲 a grass warbler or a tailor bird, while a second writer says that the *chou-chiu* is a *ch'iao-liao*, and a third that the *sh'ch'iu* is one.

3rd. There is the *shwang-chiu* 爽鳩 or fierce dove. This expression occurs in the Tso-chuan as the designation of the chief criminal judge of the emperor Shao-hao who styled his mandarins after the names of birds.⁶ The fierce dove is interpreted to mean a hawk—a bird which, as will be seen, is in the minds of the Chinese closely connected with the dove.

4th. There is the *chü-ku*⁷ 鸚鵡. Dr. Williams says this bird is a sort of grackle, or a singing thrush, perhaps the *Turdus violaceus*, and Mr. Swinhoe makes it the mainah. It is also called the *pa-ho* 八哥 or eight brothers. The description given of it in the Pên-ts'ao shows it to be the mainah, and gives one a tolerably good idea of its appearance and habits.

There are also several other names of birds containing the character *chiu* 鳩, some of which will be found in the part of the Urh-ya that treats of birds, but it would probably be useless to enumerate them here. Those which have been given are sufficient to indicate the laxity with which miscellaneous birds are admitted into this family: and I may now proceed to the descriptions which Chinese writers have given of the doves. These will be found to be very vague and meagre, and in the case of the white dove I have not found any description whatever given.

The *pan-chiu* 班鳩. These birds are either large or small. The small *pan-chiu* are of an ashen colour, with short tails, and without any spots or other ornament. The large birds have the nape of the neck adorned with spots like the flowers of the pear tree or like pearls.¹ The Tai-wan-foo-ch'í says that those of Formosa are unlike those of the mainland, but it does not specify the particulars in which they differ. This bird is identified by one writer, Liu-ch'í-ch'í 陸璣直 with the *ku-chiu* 鵓鳩, but he is contradicted by another who says that the *ku-chiu* resembles a magpie but is smaller, has a short tail, is of a greenish black colour, and is fond of perching on the ridge of a house early in

the morning and cooing there for a considerable time.⁶ As this bird is also called *chü-chiu* 拙鳩 or stupid dove, and as this quality is, as will be seen, ascribed to the *pan-chiu*, which latter also cooes in the early morn on the house top, the identity is not very improbable. The author who dissents from this view says, however, that the one differs entirely from the other, as the *pan-chiu* is variegated on the nape of the neck. Dr. Williams says of the *ku* 鵓 that it is "a sort of turtle or wild pigeon, having a short tail; perhaps a francolin; also a kind of kite or glide,"—a description from which one can scarcely form a clear conception of the nature of the bird in question.

The *shü-chiu* 鳩. This bird is said to be like the *yao*⁸ 鵲 or harrier—of the same size as the *pan-chiu*, but of a yellow colour, and to have a long tail.¹ It is also said to resemble a jay, to have a long bill and a crest on its head. Its tail is short and along with the crest is of various colours,⁶ thus evidently meaning a hoopoe.

The *huo-chiu* 火鳩. This bird—the *Turtur humilis*—is according to the Tai-wan-foo-chi chestnut colour on the breast.

The *lü-chiu* 綠鳩, according to the Tai-wan-foo-chi (Swinhoe's translation) "has a violet (紺 *kan*) bill and (碧 *pei*) turquoise plumage, more brilliant than that of the *ying-woo* 鸚鵡, parrot; but possesses no fine voice, yielding in this respect to the white dove." The *lü-chiu* is mentioned also by Li-shi-chen, though the bird to which he refers is probably not a treron.

The *chin-chiu* 金鳩 or gold dove. The Tai-wan-foo-chi describes this bird as having a green body, and both bill and legs of a red colour. It is said to be found only in Tamsui or south Formosa. In a passage, referred to above⁹ in the Pên-ts'ao mention is made of a kind of small dove of a red colour and fond of congregating in flocks, but I do not think that the writer alludes to a genus similar to this gold-green dove of Formosa.

HABITS AND QUALITIES.

The Chinese regard doves as very stupid,¹⁰ and one writer goes so far as to say that they are the most stupid of all creatures. Hence an individual wishing to speak very humbly of his own natural powers says he is "dove stupid"—*chü-ch'ü* 鳩拙. Chaucer, it will be remembered, in the "Assembly of Fowles" makes the dove speak of herself in a similar depreciating manner:

"I am a *sede foule*, one the unworthiest,
That wote I well, and leest of conning."

In compensation for deficiency of ability nature is supposed to have conferred upon the dove several moral excellences which make her of better repute than the clever birds which are destitute of any good moral qualities; thus some doves are remarkable for filial piety, some for faithfulness, and some for impartiality.

The stupidity of the dove is said to be chiefly manifested in the matter of nest building. The *pan-chiu* or turtle is supposed to make a coarse nest for itself by forming a slight frame of a few dry twigs loosely put together.¹ The poet Han-shan¹¹ 寒山 also commenting on this fact makes it an evidence of ability—"People say that the dove is stupid, but I say she is clever, for with one or two branches only she makes a home for herself. The *shü-chiu*, however, is worse than the above, for she cannot construct a nest of any sort. She lays her eggs and hatches her young either in the hollow of a tree or in the empty nest of a magpie or jay. This notion is supported by the venerable authority of the Shi-ching which says:—"The magpie has a nest—the dove (*chiu*) occupies it." On these lines the commentator remarks that the magpie is expert at nest building, making his nest well formed and durable, but that the dove is so stupid that it cannot build a nest for itself, but probably occupies the finished nest of the magpie. As to the white dove, instances are repeatedly recorded of her having built her nest in the thatch of a cottage, or above the door, or even in a temple, and of her having retained the nest for a considerable period of time.⁷

The number of young ones which the dove is supposed to hatch at a time is seven, and this is thought by some to be the reason that the numeral *chiu* 九, nine, appears as the phonetic element of the character *chiu* 鳩, the seven young ones together with the parents making up this number, and so the original idea implied in the character is *the family of nine birds*. Other explanations, however, have been given of the use of the character *chiu* as the phonetic of this word;¹² and it seems to me not improbable that inasmuch as formerly over all China the word for nine was *kau* or *kiu*, the character for nine was used as the phonetic of the character for that bird to which the name *kiu* had been given, perhaps as indicative of its call. The process described by the Chinese may thus be the reverse of what actually occurred—the notion of the family of nine having arisen from the independent

meaning of the character which was appended to the character for bird merely to indicate the peculiar note of the dove. This, however, is only speculation. The notion of the dove hatching seven eggs at a time is alluded to in the Shi-ching. "The wood-pigeon (*shǐ-chiu* 鳩) is on the mulberry tree. Her young ones are seven"—or "the wood pigeons are" &c. *i. e.* the parents together with their brood seven are nestled in the mulberry or at least all perched on its branches. Notwithstanding this high authority, however, the Chinese have in some cases become sceptical about the truth of the assertion, and have even ventured on a different statement. Thus according to the text-book of Ornithology (*chin-ching* 禽經) the number of young ones which the dove hatches at a time is only three, and of these one is *nyoh* 鸞, which Williams tells us is the osprey or fish eagle, thus reducing the young doves to their normal number. Those who hold to the old doctrine explain the fact of only two or three birds being hatched by the badness of the nest which allows the eggs to fall out from time to time;⁷ but as the context of the passage in the *shǐ-ching* shows plainly that the young birds and not the eggs are alluded to this excuse will scarcely suffice.

The existence of monogamy among doves was, of course, observed by the Chinese long ago, yet the male is represented as sending away his mate on the approach of rainy weather, recalling her only when fine weather has returned. The virtue of marital fidelity, however, is little insisted on, and seldom mentioned. Among doves as among featherless bipeds the paramount duty of filial piety makes every other duty of little account, and where we would talk of the dove flying or perching with his *mate* near him, the Chinese talk of him as being with an aged parent.

The favourite haunt of the dove, but especially of the wood pigeon, is the mulberry tree. The poem last quoted from the Shi-ching represents the parent or parents as remaining on it while the giddy young ones are changing from the mulberry to the plum, and from that to a buckthorn, &c. The berries of this tree also afford nourishment to the dove, and the *ku-chiu* 鳩 is represented as being so fond of them as to eat until she becomes drunk, accordingly the Shi-ching contains this excellent admonition. "Ah, my dove, do not eat of the fruit of the mulberry tree." It is because the eating of this fruit to intoxication injures the moral nature of the bird that this advice is given. In addition to mulberries the sprouting cereals of the fields afford

nourishment to doves, but they are supposed to be almost omnivorous, having excellent powers of digestion.

A peculiar and purely Chinese idea about the dove is that it collects and concentrates in itself *yang-ch'i* 陽氣, that is the purer and better part of the essence of things. This it does while perched on the roof of a house or the top of a tree in the early morning. The early and better part of the day is said to be *yang*, and the later and worse part to be *yin* 陰; and the above idea if translated from the language of mystic philosophy into that of ordinary life, is perhaps equivalent to saying that the dove gets the pure and fresh morning air, in short gets the proverbial "worm." It is from this notion that the word *chiu* 鳩 has come to mean to amass or collect, mostly in a good sense, I think. With this meaning it is used in the Yao-t'ien of the Shu-ching where Medhurst translates it by "has consolidated," and Dr. Legge does not know well what to make of it, but where the Chinese commentator simply explains it by *chiu* 聚 to collect together.

Another extraordinary notion which the Chinese have about the dove is that it undergoes periodic metamorphoses. The turtle dove or *pan-chiu* is transformed in autumn into a bird called *hwang-ko-hou*¹ 黃褐侯. One author says this bird is like a dove but of a greenish colour. Another writer speaks of it as a diminutive dove of a reddish colour,⁷ and he adds that when it is said that the dove is transformed into a *hwang-ko-hou*, allusion is made to the appearance of this latter bird in summer. It also is fond of eating mulberries and sprouting grass. The Pên-ts'ao makes this transformation to take place in the spring, but another work makes it to occur in autumn.⁷ The bird recurs to its original condition in the autumn according to the former work, and in the spring according to the latter. If the *hwang-ko-hou* be conceived as a dove of bright colour into which the turtle dove is transmuted in spring, we may, perhaps, regard this as the Chinese way of saying that

"In the spring a livelier iris changes on the burnished dove."

But there is another transformation which does not admit of so easy an interpretation, viz: that of the *shih-chiu* into a sparrow hawk. In the Yue-ling 月令 chapter of the Li-chi classic 禮記 it is written [In the middle moon of spring] the sparrow hawk is transmuted into a dove," and in the Wang-chi 王制 chapter of the same book it is written "The dove is transmuted

and becomes a hawk." The commentator observes on this that the transformation must take place in the middle month of autumn as the other transformation was said to take place in the middle month of spring. Lee-tzŭ 列子 says that the harrier 鵟 becomes a *chan* 鵟 or falcon (?) which becomes a *pu-ku* 布穀; and this last finally returns to the harrier stage.⁷ Another writer says that the *hawk-existence* of the bird is when it is carnivorous, and its *dove-existence* is the period of its non-carnivorous state. The word which I translate "transmute" or "transform" is *hua* 化, and the commentator on the former passage quoted from the *li-chi* is careful to explain that the term is used advisedly, as it indicates a revolving transformation from hawk to dove and from dove to hawk. The Pên-ts'ao gives an easy and satisfactory explanation of the metamorphosis by stating that these two birds are alike in their *ch'i* 氣 that is, the original essence of their being—the *material* as opposed to the *formal* part of their constitution. Another statement in the same book, the author of which seems to have been bordering on a state of intelligence, is to the effect that in the case of doves which are kept in confinement for some years, no transformation is seen to take place, either in spring or autumn. He might, however, have surmised that the absence of these changes was due to the fact of domestication.

I shall now endeavour to give some account of the moral qualities which Chinese authors and the Chinese generally ascribe to doves. The first and greatest virtue is filial piety, and two doves are particularly noted in this respect—the prayer (*chou* 祝) dove, and the white dove. The latter bird is supposed to take great care of its parents, and also to sympathise with human beings who act in a similar manner. Stories are told of it building its nest in the thatch of a cottage where a pious son was supporting an aged mother, and of its continuance there during the years that the son mourned for his mother on her decease.⁷ The virtue of compassion is another attribute of the dove, especially of the wood pigeon. Steadiness and orderly conduct are also attributed to doves. In a poem in the *Shi-ching* already referred to, the parent dove is represented as remaining stationary on the mulberry tree while her young ones are flying about. There is also the common saying that the *ch'iao-liao* 鵯鵯 is clever but dangerous—the dove stupid but steady. So too in the *Tso-chuan*⁶ the name prayer dove (*chou-chiu* 祝鳩) is that which is given to the *ssü-t'u* 司徒 or officer charged with the general superin-

tendence of the government and education of the people; that bird being regarded as pious and well conducted, and education being regarded as the great means of making a people orderly and settled in their mode of life. From this notion about the dove the word *chiu* 鳩 came to mean to bring to and keep in a state of order and peacefulness, thus *chiu-min*¹³ 鳩民 is said to be equivalent to *an-min* 安民 meaning to tranquilize the people. Another attribute of these birds is impartiality, a virtue which is assigned especially to the wood pigeon in the treatment of her seven young ones. In the morning she feeds them, beginning at the highest and going down to the lowest, and in the evening when feeding them she reverses the order.⁷ While the Chinese are aware that the mother feeds the little doves from her mouth, they do not seem to know anything of the peculiar apparatus by which the food is prepared; at least I have not found any trace of such knowledge. They believe, however, that the powers of swallowing which these birds possess are remarkable, and that even up to the time of old age they never choke. It is from this coupled with the idea of filial piety in the dove preserving its parents to a ripe old age, that the staff which the emperor and the great officers of the kingdom present to old men is called the *dove staff*. About the middle of autumn the District Magistrates and the Intendants of Circuit present the old men of 70 years of age belonging to their jurisdiction with a jade staff and some rice congee: to those of 80 or 90 years they present a jade staff of 9 feet (*chi* 尺) long and surmounted by a dove.⁷ This is the prescribed procedure, but I do not think that many of these jade sticks are to be found, the less expensive article *wood* being much more generally used. That which is symbolised by this act is a wish that the life of the donée may be prolonged and that his power of swallowing and digesting his food may not wane—long life and good digestion being attributes of the dove.

I now pass to the consideration of the offices which these birds are supposed to perform for the good of mankind. Several isolated instances of acts of kindness performed by doves to particular individuals are recorded in Chinese history, and they are supposed to have a considerable amount of tender feeling for suffering mortals. A famous case is that of Han Kao-tsu 漢高祖. This emperor had been defeated by the usurper Hsiang-yü 項羽, and was flying for his life with Yü in hot pursuit. Just as he was almost getting up to Kao-tsu the latter jumped into a sort of pit, and a dove immediately perched on the side and began to coo.

Yü coming up and seeing the dove seated there, thought that it was impossible his enemy could have concealed himself there, rushed on, and allowed the unfortunate emperor to escape. There are other good deeds, however, performed by the dove which are of constant recurrence and of general utility. Of these one is the informing husbandmen of the time for sowing their seed. This office is assigned more especially to the *shī-chiu* 鴿鳩 or wood pigeon, and nearly all the aliases of this bird are derived from the above notion. Chang-hua 張華 says expressly—"At the commencement of the agricultural labours this bird flies to the mulberry tree where it coos, as if saying the five [kinds of] grain can be sown abroad (*pu-chung* 布種), and therefore it is called *grain scatterer*" (*pu-ku* 布穀). What could have led a scholar like Mr. Swinhoe to translate these two words as the name of a bird by "cloth grain," as he has done in his translation of the Zoological chapter of the Tai-wan-foo-chī quoted above? Now we have seen that the Chinese mix up notions about several other birds in their accounts of this family; and I fully believe that the cuckoo is one of the birds which have been grouped under the term *chiu* 鳩. One of the names of the dove is *ku-chiu* 鵓鳩 or as it is more generally pronounced *ku-kiu*, and this is no bad imitation of the cuckoo's call. Besides the cuckoo does not usually build a nest, and does call in the spring time, and neither of these things can be said especially of any dove. Again one kind of dove is called the fierce or cruel dove (*shwang-chiu* 爽鳩), and the young cuckoo is proverbial for its cruelty. Besides Mr. Swinhoe says expressly that the *pu-ku*, which it will be remembered, is the same as the *shī-chiu* or wood pigeon, is "the crow pheasant or larkheel cuckoo, *Centropus affinis*," and in Amoy, as Mr. Swinhoe says, the cuckoo is called the dove hawk. In the picture which the Chinese give of the *pu-ku* also there is more resemblance to a cuckoo than to a dove, though this is a matter of very little importance as their representations of animals are generally very bad indeed. Accordingly, I have arrived at the conclusion that the *shī-chiu* 鴿鳩 is a wood pigeon or a dove of some sort, but that the *pu-ku* 布穀 though said to be the same as the former, is really a cuckoo. And here it must be remarked that the dove and the hawk are represented by the Chinese in intimate connexion. Some suppose that the hawk does not kill the dove, just as some old authors of the west have thought that the windhover is a friend to the dove and never kills her. Other birds of prey,

however, seem to be mixed up by the Chinese with the hawk in this respect. One author says that the *hsiao* 鴞, which Dr. Williams says is a sort of barn-owl, is produced by the dove; and, as has been stated above, the text-book on Ornithology makes one of the three young ones of the dove to be a bird of prey. There is also the story of the owl meeting the dove, and on telling that bird that he was about to go to the east, of the dove advising him to change his note as it would be disliked by the people of the east.⁷ With reference to the above matters, it is perhaps worthy of notice that just as Chinese writers assert that the cuckoo becomes changed into a hawk, so in parts of Germany and England up to the present time many persons believe that the cuckoo is in summer changed into a sparrowhawk.¹⁴ I cannot say what is the origin of this belief in Europe, but it is certain that the cuckoo has in many places been regarded as a strange and mysterious bird.

“O Cuckoo! shall I call thee bird,
Or but a wandering voice?”

The ancient Greeks made it the sacred bird of Here, and, if I remember aright, its figure adorned the top of her sceptre. Why it should be confounded with a dove does not seem very clear to me, though the idea is perhaps not stranger than many popular ideas about birds among our ancestors or even among ourselves.

Another kind service which the dove performs for man is to announce the near approach of rain, and the return of fine weather. When the sky becomes cloudy and rain is impending the cock dove sends away his mate; she is distressed at this temporary separation from her love and coos dolefully from the ridge of a house, thus warning the husbandman to prepare for the coming rain. The dove's coo has often been represented as indicative of distress by others than Chinese. The Latin word *gemere* means to lament or mourn, and it is the word which expresses our word *coo*. So also Thomson makes the dove mourn and lament though for a different reason, and in Spring he represents the rest of the birds as singing merrily.

“While the stock dove

“Breathes a melancholy murmur through the whole.”

When the rain has ceased and the sky has become clear the cock then mounts the roof of a house or the top branch of a tree and pleads with his mate to come back to his lonely nest. It is

a sin to do it, but I cannot refrain from quoting a stanza of Wordsworth which expresses in exquisite language what the Chinese thus state in few and prosaic words.

“I heard a stock dove sing or say,
His homely tale this very day,
His voice was buried among trees,
Yet to be come at by the breeze;
He did not cease; but cooed—and coo’d;
And somewhat pensively he woo’d;
He sang of love with quiet blending,
Slow to begin, and never ending;
Of serious faith and inward glee:
That was the song—the song for me.”

In England the owl, which the Chinese suppose to be hatched by the dove, is popularly regarded as a foreteller of rain—so also is the woodpecker. The white dove is said in the Tai-wan-foo-chi to coo at the fifth watch—to know the times and seasons, and to mark the limit of each period of time by several continuous coos, it is also said that this bird “in blowy weather dances its wings and moves in circles.”

Regarded from a medical point of view also doves are of considerable utility to man. Their flesh is said to be sweet, plain, and free from poison. It makes the eye clear, and when taken in large quantities it increases the essential elements of existence aiding both the active and passive constituents thereof. When taken by a man long enfeebled by disease it repairs his constitution, and delivers him from a liability to choke. The explanation of this notion would be that doves never choke, but swallow and digest their food well, and that from this fact and the general steadiness of their lives they attain to a great age—accordingly any person eating their flesh is supposed to receive some share of the above qualities. As a doctrine nearly parallel to this may be mentioned that of Bacon and others in the west, viz:—that the flesh of long lived animals when eaten by any one tends to give long life to the eater. Aristotle and Bacon both attribute long life to doves, and the latter recommends (along with other long lived birds) “wood pigeon (especially if the flesh be slightly salted)” as an aliment likely to make the juices of the body less liable to be preyed upon.¹⁶

The blood of doves when cooked and taken internally is an antidote to the bites of poisonous insects, while its excrement

cures ear sores and running ulcers. In order to cure the ear sores it must be mixed with another medicine named *ye-ming-sha* 夜明沙 and blown upon the sore. *Ye-ming-sha*, that is, night clear sand—is the name of a dark brown powder, very coarse and not unlike tea dust. It is said to be made of the excrement of bats and really contains a considerable admixture of *Cantharides*. It is used by Chinese doctors at present as a cure for weak eyes, and the reason is that as bats fly in the dark they must have excellent powers of vision, and anything belonging to or proceeding from them must share in this quality. Of the *shih-chiu* or wood pigeon it is written that its flesh is sweet, delicate, and without poison. It also gives one a composed mind and enables him to do with little sleep. Its foot and leg bones have the very delightful quality of exciting affection between husband and wife. If on the fifth day of the fifth moon the husband take one of these bones and the wife take one, each putting the bone into a basin of water, one from the left and the other from the right side, the two bones will come together, and float together, thus indicating a long and happy union to the parties trying the experiment.

I have not found in my reading hitherto any notice of the death of a dove recorded or described by a Chinese author, and it is not easy to guess how and where he would suppose the bird to die. Does the old cock die in the first nest he stole from the magpie, with affectionate doves of the first and second generation tending him assiduously until he ceases to exist? Or does he never die at all but live on for ever with his mate, renewing his age with every transformation? With this uncertainty as to the fate of the dove ultimately I bring my remarks to a close.

The meagre and imperfect account which I now conclude of the notions taught by the Chinese, and especially by Chinese scholars, concerning the family of the pigeons will, I hope, give at least a faint idea of the superficial and erroneous manner in which they have studied nature. Taking the high *a priori* road they have formed hypotheses about her and her working, and have never tried to verify these hypotheses by actual experiments. Errors of every kind, accordingly, disfigure their writings whenever they treat of the operations and agencies of Nature; and by the great force of authority these errors are repeated from book to book and from age to age.

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PART II.

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11. *Kwang-shi-lei*. ch. 35. 鳩.
12. See Lee-tzû's 列子 notion as given in Kang-hsi under.
13. Kang-hsi's Dictionary, under the character 鳩.
14. Kelly's Indo-European Traditions and Folklore, ch. 3.
15. The word *Ch'i* 氣 I have found very hard to translate in many passages so as to convey the idea in the Chinese writer's mind. I think the term "humour" as used by old writers is perhaps the nearest approach to it. That portion of the constituents of man's life which he shares with all other living creatures is perhaps what is at least included in the word.
16. *Historia Vitæ et Mortis*.

ARTICLE XII.

THE BITUMINOUS COAL MINES WEST OF PEKING.

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THE hills west of Peking called Sishan contain enormous beds of coal which have been worked by the Chinese from before the time of Marco Polo. The Venetian traveller was astonished at the sight of mineral coal burnt in the houses of Khanbalu, to his eye, wanderer as he was, a new thing. Six centuries ago, as now, camels and mules laden with coal-bags threaded many a path between the imperial city and the coal pits among the hills throughout the winter months.

The Mongol palace is now an ornamental lake immediately on the west of the present palace. The old city walls are in ruins, and have been replaced by the existing noble walls erected on a smaller space within the old in the early part of the Ming dynasty. The Mongols, then lords of the country, now enter it—as subjects to make prostrations,—as faithful Buddhists to worship,—or as traders to sell the products of a pastoral region. But the Chinese, so often conquered by Tartar races, have maintained their superiority in intellect and industry, and still carry on the multitudinous arts of civilized society, with as much persistence as is shown by the nomade Mongols in keeping to a tent life and the care of cattle.

Anthracite and bituminous coal of good kinds abounding in their neighbourhood the artisans and housekeepers of Peking have found out the value of each kind. Some of the uses to which they put them will be mentioned in this narrative.

In July 1867 I accompanied a friend on a visit to the Chai-tang coal mines. By resting during the day and travelling only at night we accomplished the tour even at this time of the year without inconvenience.

Leaving Peking in the evening we passed the night at Palichwang near which is the Cemetery of the Eunuchs and a large and handsome Pagoda of the Ming, or according to some the Tang dynasty.

The hills six miles off extend in a chain from N E to S W and form a beautiful boundary to the prospect. The intervening country is well wooded and the ground not occupied by villages and cemeteries is well cultivated with the various kinds of millet and other products.

Fifteen miles westward of Peking, after leaving on the right the temples where foreigners reside in summer, our carts stopped at a town called Sankiatien on the Hwunho. Here that river issues from the hills and proceeds in a south-easterly direction to Tien-tsin. From its origin in the Mongolian Plateau, 60 to 70 miles west of Kalgan, it has wound its way to this spot, in all about 200 miles. Rushing down a deep gorge called Ngoling, (*Goose pass*) from the heights of the plateau it waters a productive country, pierces the outer great wall at Sinpingkow, intersects some hills and smiling plains, and also some broad tracts of barren sand to the south-west of Kalgan and Siuenhwafu and enters the great hill range west of Peking at Pauan. Its windings through this range are probably 100 miles in length. Through the whole distance it is on account of its rocky bed unsuitable for boat navigation, but it is crossed at several points by ferry boats at favourable times of the year. The first bridge which spans the Hwunho is at the point where the great south-west road from Peking meets it at Lukeuch'iau, eight miles from the Chinese city.

At Sankiatien we procured mules and crossed the river by ferry, the animals wading. The mules bring coal from the mines to this point. It is laid up in coal yards here and is afterwards conveyed to its destination by camels, whose soft broad feet walk easily on the flat plain of Peking, but cannot climb mountain paths.

Ascending from the left bank of the Hwunho we reached the imperial glazed tile manufactory at Lieulikü. Yellow tiles for the emperor's buildings and green for those of princes are here made. The fuel used is coke brought from Chaitang, where it is made by the miners in the open air at the pit's mouth. This is one of the principal uses of bituminous coal in this part of the

country. Coke was also extensively employed in casting iron cash in the last reign.

As we advanced up the hill we left behind us the valley of the Hwunho and the hills beyond it; the road crossed a ridge on the other side of which we again met the river when it bends to the south-west. We passed along its sands for a mile and then ascended another much longer pass called the Nieukioling (*Cow horn pass.*)

Beyond this when it was near midnight we were refused lodging at a village from alleged scarcity of fodder and were reluctantly compelled to go forward over another steep pass where the road led immediately above the river to Ankiachwang, at which place after crossing the river in the dead of night on our mules we found very humble quarters in a ruined inn.

On commencing our third day we found that we had penetrated the hills 17 miles the preceding evening, touching the right bank of the river at three points, and that we should now having crossed it ascend its left bank for twelve miles more before leaving it to enter the Chaitang valley. The whole of our journey was over the limestone formation.

That the route we had come has been long used as a mule track for coals is evident from the inscriptions in the third pass, which showed that the repairs and improvements that made it serviceable had been effected by an empress* in the reign of Wanli in the 16th century.

Six miles from our stopping place the road emerged into a broad open space where a valley from the north-west meets the Hwunho. Up this valley there is another road to Peking which we took on our return, and by which the proposed railway is likely to proceed.

The route pursued by the mules here leaving the river, which bends west-wards, crosses Hiamaling a pass two thirds of a mile in length and about 700 feet high. On the other side we rejoined the river and did not leave it again till we reached Chingpaikeu, where we crossed it on the mules backs, and ascended a valley ten miles to Chaitang which place we reached at 11 P. M. in a heavy shower of rain.

* This empress was regent during the minority of her son Wanli who came to the throne when four years old. She obtained a great fame by her charities and public works.

The resident mandarin, a Mahomedan came to see us in the shop where we were entertained. He says his ancestor emigrated from Bohara and he will therefore be probably of Persian descent. He states that an Ahhung of Dubtai in Chinese Turkestan arrived in North-China lately to restore the true doctrine of Mahomet. He spends his time in going from mosque to mosque, explaining the Koran to those who will hear. This Ahhung speaks the Chinese language, though himself a Turk.

At Chaitang the bituminous coal strata commence. They are worked at each side of the valley on the hill sides and in the hollows between. Experienced miners go out to look for marks of coal in the lime stone rock. They notice a wedge of coal with limestone on each side of it, or sandstone or slate on one side, and limestone on the other. Observing its inclination they commence digging at a few tens of yards distance, where they are likely to meet the coal not too far from the surface by digging to it in a slanting direction.

The first mine we visited was a small one worked by four men who lease it from the land owner for a payment of twenty per cent. of the produce, and divide the remaining eighty per cent. among themselves. The mine is about 70 yards long in two branches one of which 30 yards in extent is exhausted, or worked to a point where stone has forced itself through the seam.

The entering shaft, 30 yards in length is at right angles to these branches which lie east and west. Besides the entering shaft there is a ventilation shaft, at the mouth of which a mechanical fan is used to produce wind. Without the fan, a light will not burn in the mine. The ventilation shaft is in this case 40 yards in length, and is straight. It becomes a necessity not because they fear fatal accidents to the miners, but to allow of certain small and indispensable oil lamps, tied with a string round the ears, being employed. In superficial mines like this the gas from coal is enough to extinguish flame, but not sufficient for the gas itself to take fire.

It is remarkable that lately in English mines it has been proposed to abandon the furnaces hitherto kept burning at the bottom of the ventilating shaft. The fire has been found to injure the gear in the shaft, and to render the ascent and descent of miners unhealthy and dangerous. The Belgian plan is now likely to come into use which substitutes a fanning apparatus at the mouth of the shaft. The current producing power of

the fan can be increased as required, but it is found practically, according to recent information,* that the force of the current of air excited by a furnace in the shaft above it does not pass a certain limit. This is one of many examples which may be mentioned, of simple but highly valuable principles of working in the arts existing in China for centuries before they were known in the west. Mousa, the Saracen conqueror of Spain, said that Heaven gave wisdom to the Greeks, manual skill to the Chinese, but religion to the Arabs.

They told us further that after working through limestone for twenty yards, an offensive coal was reached which they call *siün mei*. Then after five or six yards they came to the good coal. The seam is about four feet thick, and the mine has been open a year and a half.†

Near this little mine were several old deserted ones. Leaving them we crossed the valley and mounted the southern hill. Not far from the top we came to a much larger mine, where the seam is from twelve feet thick to four or five feet, and has been worked for ten years. It is not like the preceding deeply inclined, but approaches a horizontal direction. There is no ventilating shaft needed here on account of the apertures through which air enters from the sides of the hill. It is not now fully worked on account of interruptions from stone and water. To remove these checks an expenditure of capital is needed for wood and labour. Much timber is used for propping the roof along the whole extent of Chinese mines. This is a precaution most necessary for the safety of the workers. From recent English statistics‡ it appears that more miners are killed by the fall of coal and stone in the mines than from any other cause. The Chinese secure themselves against this danger by using timber props ungrudgingly, but this much increases the expenditure of capital. In this case we were told the mine could be put on full work by an outlay of Tls. 150, fifty for wood and the rest for labour and miscellaneous items. Sixty days' labour would be needed for removing water and cutting through stone and faults.

* Vide Edinburgh Review, April 1867, "Collieries."

† This mine and many other small mines have been opened since the visit of Mr. Pumpelly which took place five years ago.

‡ Vide Edinburgh Review as above. Mr. Pumpelly says of this mine (Fu-te) that it dips into the mountains at 45° in a direction east by south, and is 8 to 9 feet thick.

Descending from this mine we passed another underneath it in the same hill and also horizontal. It extends to about 300 yards or one sixth of a mile. Both this and the preceding are worked in thick seams of good bituminous coal not greatly inclined to the horizon. They belong to the same owner, but he is poor and at present there is little demand for this kind of coal in Peking. They work only for the resident Europeans. On full work twenty-five mule loads per day could be produced or from 60 to 70 peculs.

We went a mile further to the south and came to a large mine capable of giving out 80 mule loads in a day or 200 peculs, that is from 13 to 14 tons. It has been worked for 240 yards and is upwards of 30 yards deep from the surface; three shafts connect it with the outer world. One is for entrance and conveying out coal, another for ventilation with the fanning apparatus, and the third for carrying out water. The coal seam is horizontal and the general thickness is seven feet. Forty men can work in it at once, who receive as diggers 120 cash or $7\frac{1}{2}d.$ per day, and as carriers 100 cash or $6\frac{1}{2}d.$ It was worked five years during the iron cash speculation in the reign of Hien-fêng, which resulted so unfortunately for the government, from 1856 to 1860. The coal was made into coke, *shui-hwo-tan*, at the pit's mouth and sold at fourteen taels of silver for 100 peculs for the use of the emperor.

In the Ming dynasty three and four centuries ago, the coal of this region was extensively worked for use in the manufacture of glazed tiles. Peking was then made what it now is, and the improvements in the buildings of a public and private kind effected in the present dynasty are only the carrying out of the models already existing. The coke of Chaitang was then an essential constituent in producing the green and yellow roofs for which this metropolis is noted.

Five miles from Chaitang to the west there are extensive coal pits and also an iron mine. This is now forbidden to be worked, as is also a silver mine in the vicinity. The emperor's *fêng shui* would be endangered by the removal of metals from the hills at the back of his tomb, which from this point lies S.S.W. at a distance of 300 *li* or 100 miles.

Mr. Pumpelly in his report on the coal mines to the west of Peking paid particular attention to those of Chaitang. He traced at one spot the coal seams on the surface for half a mile

till they disappeared under loose gravel and earth. Above and below were several other seams indicating great abundance of this mineral. The coal is equal to the best steam coal. By a vertical shaft seven hundred feet deep, a million tons of saleable coal could be produced for every thousand yards of horizontal extent of seam. By working parallel seams with the same shaft and machinery, double the amount could be raised, and by deepening the shaft to 1,500 feet four times that quantity would be obtained. According to Chinese calculation 850 tons could be raised in a year, which would be about one third of a steamer's consumption. With the native mode of working, at a depth of 70 yards water becomes an insuperable difficulty.

Such is the difference in results between native and European methods.

The Chaitang valley is well cultivated and for much of its length is a mile in width. It supports several villages and abounds in vegetable productions.

Mr. Pumpelly in his report (which has since been printed in a Washington blue book, and also presented to the Chinese government in a translation) lays down the line a railway should pursue intended to convey bituminous coal from Chaitang to Tungcheu. Ten miles down the valley from the mines would bring it to the Hwunho with a nearly straight course, and through a flat country. It would then for six miles follow the windings of this river, crossing the pass called Hiamaling 700 feet high in order to avoid the western bend. On reaching Chingyükeu the railway would ascend a valley and a pass called Fotauling a distance of ten miles to the top of this pass which is perhaps 1,000 feet. Another fifteen miles down a gradual descent to Yangfang would bring the railway to the Peking plain where a distance of twenty-five or thirty miles would convey it to Tungcheu at the head of the Canal. The native estimated distance from Peking to Chaitang is 175 *li* by the Têshêngmên and Yangfang. By Sankiatien according to native reckoning it is 160 *li* or 53 miles, but the numerous passes on the way are an effectual bar to a railway.

Returning by the route proposed for the railway we slept at Chingpaikeu and the next night at Yangfang. The effect of the drought prevailing in the northern provinces through the first half of this year was seen every where. The price of provisions has risen fifty per cent. The wheat is completely lost

but should rain come in sufficient quantity the autumnal crops may still be saved. We heard of a few cases of starvation in small villages where there is no regular demand for work. During our journey rain began to fall and revived the hope of the people.

Among the occupations of the inhabitants in this hill district may be enumerated the production of Silk in small quantities. Silkworms are fed on the mulberry leaf, and the Silk conveyed to Yücheu at 100 miles distance, where it is woven into cheap lutestring. A gown of this material costs about a pound sterling. It is called Yücheukiuen.

A vegetable green die (*Liikan*) is made from the bark of two shrubs which grow wild on the hills. They are called Malip'itsi and Nieulip'itsi. The dye produced is not so good as that made at Kiahing near Shanghai, and only fetches half the price. The northern dye is much used for dyeing Cotton Cloth, and is manufactured at Yangfang also near Chaitang, and at several other places.

Another branch of industry we noticed was the grinding of elm bark into dust by water overshot mills. The running water in the valley is banked up into a miniature canal, and guided under the mill. The water turns an upright wheel, *li-lun*, which again turns a large horizontal one, *ta-wo-lun*, which acts upon the grindstone. The dust has a fragrant smell and is made into incense sticks. The immense demand for incense sticks in Peking is partly met by these water mills, of which we saw three.

Much valuable information on these mines and the routes leading to them may be found in Mr. Pumpelly's report made for and at the expense of the Chinese government, and also in Mr. James McLeavy Brown's report of a visit to Chaitang a little earlier to examine if it were practicable to supply coal to the British navy in China from this place. Mr. Brown's paper was published in a blue book on China about four years ago.

Bituminous coal is much less thought of by the inhabitants of Peking than Anthracite, which is the staple article for domestic use. Anthracite coal is found in abundance at much nearer points as at Menteuken 17 miles west and at Fangshan 35 miles to the south-west of Peking, and is therefore cheap.

On this account the working of the bituminous coal mines is fitful and dependent on government requirements.

ARTICLE XIII.

RETROSPECT OF EVENTS IN CHINA AND JAPAN

DURING THE YEAR 1867.

By THOS. W. KINGSMILL, Esq.,

Corresponding Secretary.

WHEN on a previous occasion it fell to the lot of the writer of the following notes to compile for this society a retrospect of the important events occurring in the year 1865, a hope was expressed that the Chinese government had cordially, though slowly, entered on the path of progress. In this hope the writer is now sorry to express himself disappointed: on the contrary the year has to all appearance been one of decided retrogression in all matters relating to the affairs of the empire, whether in its internal relations with its own subjects, or its external intercourse with foreign powers. During the year a general feeling of uneasiness has been apparent, and neither amongst the Chinese nor with foreigners have feelings of cordial unanimity been displayed.

The approaching revision of the treaty of Tien-tsin, affecting as it was felt it must the whole political and social relations of China with foreign powers, was the main topic of interest; but the year has been comparatively barren of events of political importance. In the dearth of politics various economic topics of importance were brought forward which have added much to our knowledge on the subject of the working of the Chinese Guilds, and the general system of co-operative trading adopted by the native merchants.

During the year China was in that state of chronic rebellion which has marked the misrule of her government for the last twenty years. In the south-eastern provinces indeed, the seat of the great T'ai-p'ing insurrection, rebellion had so worn itself out that profound peace may be said to have prevailed;—a peace however which in many localities, and especially in the provinces of Kiangsu, Anhwei and Kiangsi, might be attributed rather to the depopulation of the country than to other causes. The most

notable instance of this depopulation was furnished by the country lying south and east of Nanking, where thousands of square miles of country were described as lying untilled and rapidly returning to a state of nature; in fact as being to all intents and purposes as much a new country as the prairie states of North America. Other vast tracts were however known to have been equally depopulated by the wretched system of fighting adopted by both sides during the insurrection. Towards the great object of resettling these districts, the government had made but slight advance; the communications were notoriously bad, and no security existed for the new inhabitants that their productions could be conveyed to a fair market. The social relations of those of the old inhabitants who had returned to their homes were described by those most intimately acquainted with the people as utterly uprooted; the ties of family, so powerful in China under normal circumstances, were broken through with a naturally deteriorating effect on the morality of the masses. In the larger cities numbers of beggars, the offspring of the bands of thieves and rebels who for thirteen years wandered unmolested over the country, huddled under the ruins of devastated houses or in huts of reeds scarcely more fit for human habitation; while in the country the habits of unthrift engendered by the unsettled state of existence during the rebellion still affected those few inhabitants who had contrived to survive.

While such was the state of a great portion of those provinces where government had been re-established, the districts which had been spared the T'ai-p'ing scourge were for the most part afflicted with new insurrections, scarcely less formidable from not possessing a recognised head or object.

The Huquang provinces for some years notoriously the worst governed in China were left completely at the mercy of bands of marauders. From November 1860 till the following April the neighbourhood of Hankow was more or less in the hands of insurgents who wandered without molestation along the north bank of the Yangtse from Hankow to the borders of Anhwei and Honan, occupying at various times the entire of the prefectures of 漢陽 Hanyang and 德安 Tehngan. In Honan disturbances likewise occurred; in Kweichow and Sz'chuen the inhabitants were in their usual state of insubordination. Yunnan however offered the most curious instance of disaffection; in the south-western portions of the province, where Mahomedans were in the as-

cendant, these restless subjects were said to have elected an emperor of their own. In any case it was not denied by the Chinese that their power had been reduced to a minimum; their mandarins were indeed allowed to reside and exercise their functions within their districts, but under the control of local committees who scrutinized their acts and dictated their despatches.

Fortunately for the inhabitants these local rebellions were not marked with the same mad spirit of devastation which characterized the T'ai-p'ing movement; there seems to have been little loss of life, and except where resistance was offered no wholesale destruction of property. Hence the curious result that in the face of the unsettled state of the country foreign trade at Hankow actually, though slightly, increased.

Such however was the weakness of the established government that it is said the provincial authorities of the Huquang more than once induced the withdrawal of the insurgents by bribes; a curious instance of malversation of funds which had been placed in their hands for the maintenance of an army sufficient to keep order and induce respect.

Such misappropriations of funds raised for special purposes are however the rule in China, and more especially are the sums collected for military purposes diverted; the standing armies supposed to exist in all the provinces are to be found only on paper; the high officials draw the pay but refuse to disburse it, till to prevent an open disclosure they find it often more profitable to divide a portion with those enemies it was intended to repress, than to keep their provinces in order and themselves in comparative poverty.

In the northern provinces of China from the seaboard to the extremity of Kansuh a more formidable rebellion raged. Honan and Shantung were overrun by insurgents, with whom 李鴻章 Li Hung-chang, so well known from his connection as Futai with the campaign of 1862-63 in lower Kiangsu, kept up an unequal contest. His position was well chosen; with his force resting on the line of the Imperial Canal between the old and new beds of the Yellow River he was enabled to draw supplies from the new arsenal at Nanking, as well as to divide the main body of the insurgents into two separate portions, one in Honan and the other in the eastern portion of Shantung. In the early part of the year his troops met with little success, and it was at one time feared that he would probably have to capitulate, his communica-

tions with Nanking having been for some time intercepted. One of his officers 郭松林 Kwo Sêng-lin who formerly acted with him in the Kiangsu campaign and who afterwards was in command at the final break up of the T'ai'ping rebellion at 常州 Changchow, having led a body of troops into Shantung, met with a severe defeat, his troops were dispersed and he himself captured and by some accounts cruelly mutilated; subsequently however he contrived to make good his escape.

Affairs seem to have continued in this state till the month of July, the Nienfei swarming in the eastern portion of Shantung. At one time they had surrounded 濟南府 Tsi-nan foo, at another they threatened Chefoo, while large bodies seem to have crossed and recrossed the Imperial Canal without molestation. Confining themselves principally to plunder in the open country they do not seem to have taken any important towns, but the speed at which they marched from one district to another always enabled them to elude the pursuit of the heavily encumbered Imperial troops. Under these circumstances Li, having received from Peking a severe reprimand for his want of success, conceived the singular expedient of surrounding the insurgents; for this purpose he drew a double line of intrenchments across the peninsula from 阜平 Fup'ing to 來州 Laichow dividing his army into small garrisons of 500 men at considerable distances, while he wrote to Nanking for large reinforcements to be sent to act on Shantung by sea. As might have been expected his scheme proved abortive; the reinforcements never arrived, nor indeed as Nanking was itself denuded of troops, could they have been sent; a portion of the insurgents escaped by sea round the extreme north of his lines, while the main body readily burst through his weakened forces and passed into his rear. A portion however under a leader by name 賴文光 Lai Wen-kwang, formerly a chief in the T'ai'ping ranks, seems to have remained behind; after varying success these were effectually dispersed, and Lai himself who had crossed the old bed of the Yellow River with a body of men and attempted to escape by outflanking Li's forces, was captured with the greater portion of his band in the neighbourhood of Yang-chow. This small success seems from subsequent events to have been the only one which awaited the Imperial arms. The main body of the Nienfei having entered Honan, effected there a junction with a portion of the Mahomedan rebels marching from Shênsi, and at the end of the year their

united forces were before 保定府 Paou-ting foo with complete command of the communications of the province of Pechili.

In the northwest the rebellion of the Mahomedan subjects of the empire was if possible more formidable: few reliable reports come to foreign ears of the state of affairs in these regions, but the constant appointment and degradation of officers noticed in the Peking Gazettes point out the importance of the movement. 左宗棠 Tso Tsung-tang, Viceroy of Fuhkien was within the year ordered to take charge of the Imperial troops, and 蔣益禮 Tsiang Yih-li, Putai of Kwangtung was likewise directed to take part in the campaign. It is not a little remarkable as indicative of the feeling of uncertainty as to the future prevailing in China that both these officers were reported to have joined the insurgents, though the rumours proved to have had no other origin than the fears of the government. The departure of Tsiang Yih-li from his post at Canton was marked by a popular ovation, a most rare thing in China, and all along his journey to the north of the province he was met by deputations from the different towns declaring their sorrow at his departure; in fact his removal to the scene of war was attributed to jealousy of his popularity on the part of the Peking government.

For the conduct of the campaign in the northwestern provinces 武昌 Wuchang in Hupeh was made the basis of operations, and here large quantities of arms and munitions were collected. Owing apparently to the bad order preserved, in the month of November the powder magazines containing some hundreds of tons of powder exploded, causing an enormous loss of life and property. So great was the shock that at Kiukiang about 120 miles off in a direct line the explosion was felt like the shock of an earthquake, the houses distinctly vibrating as if heavy articles were being moved about. A mutiny was said in the following month to have taken place amongst the Imperial troops at 襄陽 Siangyang-fu from the usual cause, the soldiers having received no pay, their wages having been appropriated by the high officials at Wuchang.

But besides these more important movements the greater portion of the north of China has been more or less disturbed by wandering bands of brigands, and almost under the very walls of the capital itself have they been permitted unmolested to carry on their depredations. In July a small body sacked the town of Wang Kia Kow 20 miles from Tien-tsin; in November Mr. Burlingame,

sometime United States Minister at Peking but then acting as Chinese envoy to western powers, was detained on his way to Tien-tsin from the capital at the town of Hoo-si-woo till foreign succour arrived from Peking and Tien-tsin, while since the conclusion of the year armed bands have twice taken possession of the communications between Peking and the sea.

The empire is in fact rapidly relapsing into the same state of utter disorganization which marked the close of the Ming dynasty, and there is every reason to believe that in many of the districts to which foreigners do not usually have access the state of affairs is, if possible, worse.

In the west affairs were equally gloomy, Ili and Turkestan were *de facto* lost to Chinese rule; in Tibet difficulties had arisen with the neighbouring state of Nepaul; to attempt to mend matters Sir Jung Bahadoor, the Rajah, sent an embassy to the court of Peking; with characteristic obstinacy and folly this embassy was turned back on arriving at 成都 Chengtu in Sz'chuen. The cordon was in fact getting gradually tightened and the influence of China over central Asia so perseveringly and carefully built up by former sovereigns had entirely collapsed. In the extreme west Russia had seized the greater portion of Khokand, Samarkand and Bokhara were at her mercy; in the southwest English influence was gradually spreading along the eastern flank of the Himalayas; France in the extreme south had succeeded in annexing the greater portion of Annam and was endeavouring to advance along the line of the Meikong. On all sides troubles were incident yet amid all a sullen and utter impracticability was the only sign of life displayed by the moribund government of Peking.

The foreign relations of the court at Peking were as little satisfactory; an increasing spirit of encroachment on the liberty of trade and a dogged opposition to measures of progress marked the course of the year. A curious case of direct interference occurred in connection with an important case tried in the Supreme Court at Shanghai, where the Taotai gave authority to the silk guild to forbid their members to trade with certain foreign houses, and actually allowed one man to be fined a considerable amount for breaking through this arbitrary rule. Not content with this the Taotai, whose name 應寶時 Ying Paou-shih deserves to be recorded, drew up a code of rules on his own authority for the regulation of the silk trade of the port. These

rules were however properly quashed by the action of the English and French Consuls and the Taotai forced to issue another edict repealing the former. In several other cases the Chinese attempted to issue similar regulations framed with the intention of interfering with foreign trade; one of these laid down a code of rules for the conduct of foreign ships in case of shipwreck; another attempted to set up an obnoxious code of rules for the establishment of a new "Mixed Court" in the foreign settlement at Shanghai; a fourth issued by the 總理衙門 Tsung-li Ya-mên at Peking forbid contrary to treaty the charter of foreign vessels by natives unless under certain objectionable conditions. This latter was the more remarkable as it was issued under the pretence of being a progressive measure intended to confer on vessels of foreign build owned by Chinese the same privileges as were enjoyed by those sailing under foreign flags. It is a curious corollary to the spirit which seems to have dictated these rules that no native merchant was found to take advantage of the supposed concessions. At Canton the spirit of the Chinese authorities was shown in their interference with the cotton trade of Hongkong, and by the attempt made to establish a blockade of the harbour, revenue cruisers having been stationed at all its entrances to overhaul native craft entering or leaving. At Hankow the circumstances attending the failure of the English house of Mackellar & Co. led the Taotai at that port to attempt interferences similar to those of his colleague at Shanghai.

But of all these cases the most glaring was the continued opposition offered to the importation into Shanghai in foreign bottoms of beancake from Newchwang. This right though expressly withheld by the treaties of Tien-tsin was afterwards granted in that made with Denmark; yet in face of this direct legalization such measures were taken at Shanghai by working on the fears of the native traders that the import dwindled away, and finally in the year 1866 was altogether extinguished. Proclamations were openly posted in the city and neighbourhood of Shanghai threatening fines and confiscation against any native who should presume to purchase the forbidden article; and so thoroughly were the fears of the natives worked on that when in August of that year two British vessels arrived with cargoes of that commodity, they were forced, after in vain waiting for a market to proceed to the south of China and sell their cargoes at a considerable loss. Although repeated complaints had been made to

Peking on this subject so abjectly helpless was the government there that no relief was effected, till in June 1867 the British Minister had a personal interview with the Viceroy at Nanking which resulted in the withdrawal of the illegal opposition. The result proved how great was the burden laid on trade; from that period to the closing of the season in November no less than 612,476 piculs of beancake and 102,610 piculs of Peas arrived at the port in foreign craft.

Next to these direct interferences with trade the antipathy of the government to make amends for old grievances was conspicuous. Of these the two most important were the Sungyang claims for damage done to foreign goods in transit through Hupeh by disorderly Imperial troops, and the so called Nanzing duties, the latter being duties over and above the legal rate levied on silk passing that place in the years 1861 and 1862. After a long correspondence and a personal interview with the Futai of Chehkiang in his provincial capital, the latter have been settled though not altogether satisfactorily to the parties interested; but nothing is known to have been arranged with regard to the former. There seems to be no doubt whatever that the system of centralization attempted to be set up at Peking has worked most unsatisfactorily for foreign interests, and it is to be remarked that none of the complaints made have been settled through the capital, but only by reference to the provincial authorities or by bringing actual influence to bear upon the spot. In fact the power of the central government has become reduced to a minimum and its commands are only obeyed when they fall in with the wishes of the more able provincial governors.

During the year the following changes amongst the Chinese officials may be noticed; the most important being the resumption of office by 曾國藩 Tsêng Kwo-fan as Viceroy of the Two Kiang while Li Hung-chang was appointed in his place Commander-in-chief in Honan and Shantung. 左宗棠 Tso Tsêng-tang Viceroy of Mincheh was ordered to the north-west as commander in those provinces, 馬新貽 Ma Sin-yih, Futai of Chehkiang being appointed acting Viceroy at Foochow in his place. The acting Viceroyalty of Wuchang held titularly by Li Hung-chang was conferred on 郭栢蔭 Kuo Po-yin; while 官文 Kwan wên, to whose incapacity much of the disaffection which prevailed in the Huquang provinces was attributed by many, was appointed Viceroy of Pecheli, which province he has

succeeded in reducing to the same state of disorganization which marked his previous rule.

At Peking two events of interest to foreigners occurred, the first the establishment of a college at Peking to teach the rudiments of foreign science, the latter the appointment of the Burlingame mission. Though scarcely more than tentative and on a scale and system by no means such as to deserve the encomiums passed on it, the college met with much opposition from the representatives of the old school. Foremost amongst its opponents was 倭仁 *Wo jên*, a Tartar holding the office of Grand Secretary and President of the Hanlin Yuen, as well as connected with the present reigning family, who presented a memorial to the Throne stating that there was a sufficient amount of ability in the empire "and should persons skilled in astronomy and arithmetic be wanted they would certainly be forthcoming." On being requested to bring such forward when found he was forced to confess his inability. Without entering on the question of the status of the college it may however be remarked that some of the appointments seem to have been very injudiciously made, so that the scheme has hardly had a fair trial.

The Burlingame mission has given rise to considerable diversity of opinion amongst those who take an interest in Chinese politics, one party considering it an effort of the retrogressive party to get rid of pressure from without, while others are well content to await the result before pronouncing a final opinion.

The name of Mr. Hart, Inspector General of Customs, has been mixed up more or less with the scheme. In the absence of information as to the real objects of the mission it is remarkable that it has already been made the excuse for delaying the development of the coal mines in the neighbourhood of Nanking, while the sums set aside to provide for the expenses of the mission are understood to press so heavily on the impoverished exchequer at the capital that monies raised and intended for other purposes have been diverted from their proper channels. Whether this is the case or not cannot be ascertained, but it has been a source of complaint that the works promised to be executed for the improvement of the harbour approaches at Shanghai have been allowed to remain in abeyance, while the tonnage dues out of which these expenses should be met have been regularly received by the Chinese Government.

The mission is understood to consist of the following officers. Foreigners Mr. Anson Burlingame, late U.S. Minister at

Peking, chief; Mr. J. McLeavy Brown, acting Chinese Secretary to H. B. M. Legation at Peking, Secretary of Legation; Mr. Deschamps acting Commissioner of H. I. M. Customs at Kiukiang, second Secretary:

Of Chinese the following accompany the mission.

Chikang 志剛 a Manchu who ranks as being on the list for promotion to a Taotai-ship and has been for three or four years attached as a Secretary to the Tsungli Yamén; Shwan Kiaku 穀家孫 a Chinese borne on the staff of the Revenue Board as an under Secretary, but who has recently been employed at the Tsungli Yamén in a similar position with Chikang. Their appointment to the mission has given each of them the button of the second rank, and to the latter the decoration of the Peacock's Feather; Chikang having had this conferred on him for former services. They are styled "Ministers for the arrangement of matters connected with the intercourse between China and foreign powers." Besides these, six students from the Tung-wênkwan 同文館 have been sent as attachés; the Chinese portion of the embassy consisting of about thirteen official members in all.

The greatest element of weakness in this first attempt at an embassy to western nations seems to be the position of the foreigners attached to it; the two Chinese officials, men of respectable abilities in a subordinate office, can scarcely be looked upon as the representative of any large or important party; while it is doubtful how far Mr. Burlingame's arrangements may be considered as binding on themselves by his employers, or if accepted by them, how far they will be carried out by the provincial governments. It is suggestive of the disorganization of the empire that Mr. Burlingame and his party were arrested in their progress from the capital to Tientsin by the proximity of a band of brigands, and it was thought necessary by that gentleman to call in foreign aid from Peking and Tientsin before continuing his journey; while in the month of January, Mr. Brown in travelling south found everywhere traces of rebel occupation, large bodies having crossed his road a few days before his arrival; the villages along the route in default of Imperial protection having had to throw up earthworks for their own defence.

As stated in the beginning of this retrospect the subject of greatest importance, as affecting foreign interests, discussed was the approaching revision of the Treaty of Tientsin. The British

and French ministers both invited in this matter advice and suggestions from the subjects of their respective nations. The invitation of the British minister was cordially responded to on the part of the merchants residing at the ports of Tientsin, Chefoo, Shanghai, Chinkiang, Kiukiang, Hankow, Foochow and Amoy, while at Hongkong a similar request from the Governor was replied to on behalf of the Chamber of Commerce at that Colony. A remarkable unanimity of feeling was the distinguishing feature of these addresses; with one or two exceptions they were confined to the detail of grievances caused through the bad faith of the Chinese in the carrying out of the Treaty of Tientsin. It was generally allowed that most of the privileges sought were really contained in that instrument, which the experience of ten years had proved to be wisely drawn up, and that had the plain meaning been adhered to on one side or insisted on by the other there would have been little cause of complaint.

Foremost among the alleged grievances was the levy of illegal taxes on foreign merchandise in transit to or from the ports, and in some instances complaints were made that even at the ports themselves attempts were made to levy illegal exactions. Others were the obstacles thrown in the way of foreigners travelling or trading in the interior, and the prohibition to their boats carrying cargo or passengers of penetrating the interior waters; the prohibition to foreigners of the right of purchasing land or erecting houses in the interior; and the continued misapplication of the Tonnage dues. The failure of the Chinese Magistrates to grant redress in cases where natives had been guilty of fraud, which had resulted in severe losses to foreigners in several of the open ports was likewise an almost universal subject of complaint; as also the unequal manner in which the present Tariff affected different articles of trade; as an instance coal was adduced, and it was shown that in some cases the amount of duties levied on Kelung coal, (the only mines available at present to foreign vessels) amounted to no less a sum than twenty three per cent. in the cost of the article. The addresses were likewise unanimous in urging some arrangement whereby it might be possible to open mines for coal and other minerals with which China is known to be plentifully endowed, and for the introduction of railways and generally improved methods of transit. They were the more pressing in these topics as they felt that the most immediate and direct benefit would accrue to the Chinese govern-

ment itself, enabling it first from the large sums accruing from royalties to increase the effectiveness of its rule, and in the second place from improved communications to be in a better position to put down internal rebellion, from the ease with which large masses of troops could be thrown upon any required spot. The right to import salt in foreign vessels subject to the regulations of the Chinese government was urged in many of the memorials; while one of the ports petitioned that all Customs dues should be repealed and the port made *de facto* free, leaving it to the Chinese to make their own arrangements for the collection of duties outside its limits.

With these few exceptions the demands made were simply for a better carrying out of the existing treaties, which it was felt could be readily amended so as to suit the gradually altering circumstances of trade.

Independently of these memorials the subject of opening the coal and other mines of China was brought prominently forward. Mr. Markham, H. B. M.'s Consul at Chinkiang, having learned of the existence of valuable coal mines near Nanking, made them the subject of a communication with the Viceroy; these mines were examined by the writer of these notes and found to promise a fair yield of coal; in addition his hasty survey of the country led to the discovery of enormous masses of iron ore of the best description and admirably situated for working. Reports on both these subjects were forwarded in due course to Her Majesty's government. Unfortunately as yet the Chinese authorities have refused to act, the equivocal answer returned by Tsêng, the Viceroy (before alluded to), being that "all such questions had been referred to Mr. Burlingame, who would make them the subject of special communications with foreign courts."

In another instance, in the island of Hainan mines of carbonate of copper of great purity were discovered in that portion of the island inhabited by the native tribes, and arrangements were made with the approbation of the Futai of Kwangtung to work them and export the produce in foreign ships. It is much to be regretted that in this instance the known jealousy of the foreign Customs establishment at Canton obtained from the Viceroy the withdrawal of this permission; the worn out excuse of disturbance of the Fêngshui was the pretended obstacle. The foreign Customs have effected so much good in the proper regulation and tabulation of foreign trade as well as in many other ways,

that it is with regret that attention is called to this case where their interference has had a directly detrimental effect.

Mr. Swinhoe, H. B. M.'s Consul at Taku in Formosa, likewise explored the Pescadore islands in which coal was reported to occur; this was made the subject of a communication between Sir Rutherford Alcock and the Viceroy of Fuhkien with the usual result, it being pleaded that the Fêngshui would be disturbed; the deposits did not seem sufficiently rich to induce a further discussion of the matter.

At Hongkong the action of the Chinese government led to peculiar causes of complaint: the principal of these was the practice of charging double duty on goods in transit between Canton and the northern ports transhipped in Hongkong harbour; as a line of steamers runs regularly between the two places, this was felt to be a hardship, compelling steamers from the northern ports when carrying portions of their cargo for Canton to go up the Canton river at considerable expense. Another cause of complaint referred to before was the manner in which custom-house cruisers watched the entrances of the harbour, preventing freedom of trade in native vessels; while a third was the illegal manner in which a monopoly had been made out of the camphor trade with the island of Formosa. In the previous year a steamer belonging to the colony, named the *Prince Albert*, had been seized by a revenue cruiser under the orders of the foreign Customs at Canton under peculiar circumstances; the colonial authorities took up the matter warmly in behalf of the owner, and a long correspondence ensued with the British Representative at Peking, who seemed however to lean to the side of the Chinese, the matter was at last compromised by the payment of a fine of \$4,000, but the conduct of the foreign Customs was generally believed on the spot to have been unjust and vexatious.

The heavy expenses of the Hongkong Government were a general subject of complaint and there was a marked decadence in the commercial prosperity of the Colony. A severe Typhoon during the year damaged the new Praya facing the harbour, which led to a legal contest between the government and the owners of the lots adjoining the harbour. An extensive fire on the 28th November which raged along a considerable portion of the Queen's Road, likewise caused a considerable loss to the Colony.

At Shanghai matters were not much better, though commercially the northern port had the advantage over its southern

rival; No great losses seem to have been made nor did any serious accident disturb the even course of the year, but on the other hand no new enterprise marked its progress. The status of the Municipal Council remained still undetermined, no action having been taken by the governments most interested.

The ports on the river Yang-tse and in the north were in a state of gradual decadence, much of which however must be attributed to the interferences with foreign trading noticed above.

One new enterprise was however successfully initiated during the year; this was the establishment by the Pacific Mail Steam Ship Company of a line of steamers under subsidy from the U. S. Government between San Francisco and Hongkong, calling at Yokohama and with a branch to Shanghai. The first ship of the line the *Colorado* left San Francisco on the 1st January 1867, arriving at Hongkong on the 31st of same month; at first the line was worked only quarterly, but as new vessels are prepared it is intended to be changed to a monthly service. On the whole the line is stated to have been worked successfully, though complaints as to the irregularity of the departures, have been made in many quarters.

In Japan events of importance occurred during the year. Arrangements were made for the opening of the port at Osaka and Hiogo on the 1st January 1868, and the foreign Ministers on their visit to settle preliminaries were gorgeously entertained by the Tycoon generally known from the name of his former office as Stotsbashi. Liberal arrangements were also made by the Japanese government with reference to the rebuilding of the foreign settlement at Yokohama almost entirely destroyed by fire the previous autumn. Few of those political disturbances which disgraced the intercourse of natives with foreigners in previous years occurred in the present, though the murder of two sailors at Nagasaki still unexplained, was nearly the occasion of a serious misunderstanding with Great Britain. The power of certain Daimios who were opposed to the Tycoonate was found so insupportable by the then occupant, that following Japanese custom he resigned in favour of the next heir. As subsequent events have entirely revolutionized the government it will suffice to say that Stotsbashi or rather Yoshi Hisa as his real name is known to be, proved himself during his short tenure of office an able and enlightened prince, and earned the respect of most foreign powers.

With the Corea nothing seems to have been done to open an

intercourse; the United States are however understood to have two vessels of war on the coast to seek for news of the fate of the crew and passengers of the *General Sherman* reported to have been brutally murdered by the Coreans in revenge for French interference. An attempt by the U. S. Frigate *Hartford* to punish the savages of Formosa for the unprovoked murder of the crew of the *Rover*, a vessel sailing under American colours, which was wrecked in the coast in the month of March, met with but partial success and resulted in the further death of Lieut. McKenzie an officer of much promise. Since then the action of the United States Consul at Amoy has resulted in a compact with the tribes, who have promised in similar cases to grant assistance to shipwrecked crews.

On the 18th December a severe earthquake was felt in Formosa; at Tamsui much damage was done and many lives lost, but unfortunately no details are available as to the exact time, and direction of the wave. The shock was felt at Shanghai at 9.57 A.M. and was also experienced at Ningpo and Kiukiang.

It would not be right to close this retrospect without allusion to an adventurous journey undertaken by Mr. T. T. Cooper, formerly an officer of this Society. This gentleman left Shanghai alone in the month of September with the intention of penetrating overland to India either by way of Sudya or the southern route by Bhamo in Burmah. Owing to obstacles placed in his way his actual departure was postponed till the 4th January 1868, at which time he finally left Hankow; since that time news has been received of his arrival at Hi yan ki on the extreme western portion of Sz'chuen, a further point than has been hitherto reached by any independent traveller. It is hoped that the courage and good temp which have hitherto marked his conduct on the journey may enable him to penetrate through the hitherto unknown districts which lie between the Ya-loong and the upper waters of the Bramapootra.



MISCELLANEOUS.

THE following description of a flood in the Han whose influence was experienced as far as Hankow, where the water after falling some feet below its summit level again rose so high on the 22nd September as to inundate the British settlement is extracted from the *Hankow Times* of October 5th:—

“Such an event as this is evidently rare, and many speculations of a superstitious character have been put forth by the native mind, to account for the flood. Dragons, such as sometimes appear at the head of some nine boa-constrictor-like creatures, are confidently stated to cause all this. Information received on Wednesday, September 25th, conveyed the intelligence that in Shansi, in the prefecture of Han-tsung-fu, there had burst forth from the ground, as from a natural Artesian well, great torrents of water, which had to come down by way of Shiang-yang-fu, Ngan-louh-fu, T'ien-men-Shien and Nien-yang-tsow, all places in Hupeh. At T'ien-men-Shien, a low district, ordinarily preserved from the usual effects of the annual freshets and inundations by embankments on every hand, the flood seems to have wrought its way down. The dykes being soon over-topped, and the city-wall being broken down or over-passed, the whole town was submerged. Large numbers of persons, who watched the approach of the waters, and compared it to a thick cloud approaching, were drowned, with others of the inhabitants of the district. The large mart of Fan-tseng is said to have suffered severely from the sudden influx of water, which presently seems to have been contained in, and confined to the river Han, on its nearer approach to Hankow. As it neared this place, it was spread over such a large district of level country, and was so much absorbed by the Han and Yang-tsze, that it made itself felt only in the slight addition made to the retiring annual inundation, which we have already described.

Had it come earlier, we should then have had fulfilled the prophecy of the natives, who predicted that this year would witness such an inundation as would put the last year's unusual rise far into the shade. As it is, the district has been happily preserved from any great calamity, and we may hope to be soon free from the inconveniences of our watery isolation.

The account of what has been witnessed at one point, is sure to be different from that of others describing the state of things in their own locality. We have purposely described the circumstances in general terms, and shall be gratified if we have ultimately succeeded in eliciting more exact and extensive information from more competent observers of such important phenomena.

Certain embankments, with floodgates, in the neighbourhood of Ngan-louh-fu, called Sih-tsz'-k'ow, (十子口) which protect the district of T'ien-men, having been broken by the unusual pressure upon them, added greatly to the mischief. It would seem that there is room for still another Yü, like the engineer monarch, founder of the Shia dynasty, who shall deliver this part of the country from its annual calamities.

Whether this outburst of subterranean waters, through some fault in the strata of the Han-tsung prefecture be the actual cause of this flood, we cannot certainly affirm.”

REPORT
OF THE
COUNCIL
OF THE
NORTH-CHINA BRANCH
OF THE
ROYAL ASIATIC SOCIETY,
FOR THE YEAR 1868.



SHANGHAI:
Printed by A. H. DE CARVALHO.

REPORT

OF THE

COUNCIL OF THE NORTH-CHINA BRANCH

OF THE

Royal Asiatic Society

For the Year 1868.

THE following gentlemen were elected office-bearers at the first meeting of the year:—

G. F. SEWARD, Esq., President.	
Rev. C. H. BUTCHER, } C. W. GOODWIN, Esq., }	Vice-Presidents.
T. W. KINGSMILL, Esq.,	Corresponding Secretary.
J. B. ROBERTSON, Esq.,	Secretary.
W. B. PRYER, Esq.,	Treasurer.
A. MICHIE, Esq., G. H. FITZ ROY, Esq., A. C. DULCKEN, Esq., G. THIN, Esq., M.D., F. C. SIBBALD, Esq., M.D., F. B. FORBES, Esq., R. J. FORREST, Esq.,	} Members of Council.

Vete. Brenier de Montmorand was elected as Member of Council in addition to the above, but declined to serve; and as there were more than the requisite number according to the rules already on the list, it was not deemed advisable to nominate any one in his stead. During the year the Society had to deplore the unexpected death of Mr. Fitz Roy at Nagasaki, and this led the Council to invite Mr. W. H. Medhurst, who had recently removed from Hankow to Shanghai, to join their number.

A list of the present Members of the Society is appended.

The following papers have been read during the year:—

Notes of an Overland Journey from Tientsin to Chinkiang,
between 24th January and 14th February,
by — Parker, Esq.

Notes on the Yellow River,
by — Weber, Esq.

Notes on the celebrated ancient Chinese Inscription on the Hang
Mountain,
by W. H. Medhurst, Esq.

Notes on Abyssinia,
by E. Hepple Hall, Esq.

Notes on the Takosima Coal Mines and the Geology of the
Neighbourhood of Nagasaki,
by T. W. Kingsmill, Esq.

Notes on Co-operative Societies in China,
by G. Eug. Simon, Esq.

Selected Passages from the Journal of Mr. T. T. Cooper's Travels
in Western China.

A few Notes on Solar Spots observed at Woosung by Mr. C. D.
Braysher on 15th April,
by D. J. Macgowan, Esq., M.D.

Notions of the Ancient Chinese respecting Music, a Translation
from Chinese,
by Dr. Jenkins.

On the Fogs of the Yangtse and how to neutralize them,
by D. J. Macgowan, Esq., M.D.

Notes on Yü Tablet,
by Chas. Gardner, Esq.

Account of the Earthquake in Northern Formosa on the 18th
December 1867,
by W. Sibbald, Esq.

Note on the Discovery of Miautsze in the Province of Chehkiang,
by D. J. Macgowan, Esq., M.D.

Notes on the Coal Fields of Northern Formosa,
by W. Sibbald, Esq.

Notices of Lok Ping Cheung, late Governor General of Szechuen,
by Rev. C. F. Preston.

A Few Notes descriptive of the Principal Highways and of the
Trade between Thibet, Burmah, Western China, and the
Eastern Seaboard,
by T. T. Cooper, Esq.

During the year the Meetings of the Society have been held in
the new Masonic Buildings.

The Council have, with the approval of the Society, had several
important questions under consideration during the year, in some
of which they have taken action. Amongst them may be
mentioned, the expedition to explore and report on the Yellow
River which was undertaken by Messrs. Elias and Hollingworth;
a proposal to secure permanent quarters of its own for the Society,

for which purpose ultimately the British Government courteously offered a plot of land for building upon at a merely nominal rent; the purchase of Mr. Alex. Wylie's valuable library of works pertaining to China and the East; the publication in whole or in part of the Chinese Repository. Annexed to this Report will be found special Reports on all these subjects exhibiting what has been done by the Council regarding them.

The Council desire to recommend that Missionaries who are elected Members of the Society should be exempt from any subscription, but that in such case they will not be entitled to receive the Society's Journal without payment. In other respects it is proposed that they should participate in all the benefits of the Society, and the Council feel confident that the Members of the Society will approve of the alterations in the Rules, which will be necessary to give effect to this suggestion. In view also of the wider scope which the Society's efforts are now assuming, it is further proposed to add to the officers of the Society a Librarian and Curator of the Museum, so that our Library and Museum may have the special supervision which will be necessary.

The following books have been received:—

From Trübner & Co.

GEOLOGICAL SOCIETY.

List of Members 1867.

Journal February, May, August, November, December,
1867, February, May, 1868.

ROYAL ASIATIC SOCIETY.

Transactions for 1867, Vol. III, Part I.

ROYAL GEOGRAPHICAL SOCIETY.

Vol. XXXVI 1866, also Parts 1-6 proceedings 1867.

ROYAL SOCIETY OF EDINBURGH.

December 1866 to April 1867.

ROYAL SOCIETY.

Vols. XV and XVI, Parts 87 to 100.

ZOOLOGICAL SOCIETY OF LONDON.

Report 1867, proceedings for 1866 Parts II and III; for
1867, I, II, III.

STATISTICAL SOCIETY.

Vol. XXX, Parts 1, 2, 3, 4; XXXI, Parts 1, 2.

ORIENTAL TRANSLATION FUND OF GREAT BRITAIN AND IRELAND.

Chronique de Abon-Djafer-Mahammed-ben-Djarir-ben-
Yezid Tabasi, Traduite par M. H Zotenberg,
Tome premier.

KAISERLICH-KÖNIGLICHEN GEOLOGISCHEN REISANSTALT.

Jahrbuch 1866, Parts October, November, December.

Die Fossilen Mollusken des Tertiär-beckens von Wien
2 Vols., pp. 215 to 430.

Also received by Mail steamer addressed to "China Branch R. A. S."

ROYAL SOCIETY OF EDINBURGH.

Vols. V and VI 1865-66 and 1866-67.

AMERICAN PHILOSOPHICAL SOCIETY, PHILADELPHIA.

Vol. X, Nos. 73-77 January 1865 to March 1867.

Also through Mr. Pryer the following books addressed to the "China Branch R. A. S."

Report of Superintendent, U. S. Court Survey 1863, 1864, 1865.

BOSTON SOCIETY OF NATURAL HISTORY.

Annual 1868-69 and 1869-70.

Boston Journal of Natural History, Vol. I, Part III.

SMITHSONIAN INSTITUTE.

Contributions to Knowledge, Vol. XV, 1867.

Report 1866.

DEPARTMENT OF AGRICULTURE U. S. GOVERNMENT.

Report 1866.

Monthly Reports 1866 & 1867.

Account of the "Public Ledger" Building Instructions in case of Accidents.—By Dr. Packard.

I.

Special Report of Council on the feasibility of establishing a Public Library.

The Council has had in consideration the matters referred to it at the October meeting, viz:—the building project, and the purchase of Mr. Wylie's Library.

The sense of the meeting referred to appeared to be that the opportunity to purchase the books should not be lost, but that the building project could stand over.

The Council, taking that this view is just, appointed a Committee consisting of Messrs. Forbes, Thin and Butcher to report what arrangements should be made for the purchase of the Library, and whether rooms for the present accommodation of the Society could be procured in the Masonic Hall, as there seemed reason to believe.

The Committee has reported to the Council as shown in the attached papers, and the Council now reports accordingly to the Society, and asks it to accept the action taken, and to instruct the Council to complete the proposed arrangements.

Report of Committee appointed by Council.

The Committee appointed by the Council to ascertain what arrangements can be made for the purchase of Mr. Wylie's library and for obtaining temporarily suitable rooms for the Society at the Masonic Hall, report as follows:—

They are inclined to believe that the Shanghai community will respond readily to an appeal for funds to found a Public Library, the nucleus of which shall be the Wylie collection, and they append the draft of a circular which they recommend the Council to issue as soon as possible.

They further recommend that a printed catalogue of the Wylie collection be annexed to the circular, and that a Committee be appointed to solicit subscriptions in the manner indicated.

Your Committee understand that the large room on the first floor of the Masonic Hall intended originally to be used as a Library, may be leased on favourable terms, viz:—for Taels Two Hundred a year, subject however, to the proviso that in case the Shanghai Library Association shall hereafter be disposed to take rooms in the Masonic Building, our Society shall accommodate matters with them.

They recommend that these arrangements be effected.

(Signed)	F. B. FORBES,	} Committee of the Council.
	G. THIN,	
	C. H. BUTCHER,	

Circular issued in accordance with suggestion of Committee.

THE SHANGHAI PUBLIC LIBRARY.

The want of a public library of reference has long been felt in Shanghai, but the difficulties attendant on the collection of suitable books have so far discouraged any serious attempt to meet the requirements of the community.

These difficulties however, seem about to disappear. The approaching departure of Mr. A. Wylie from Shanghai places within our reach the valuable library which he has accumulated during his many years of scholarly research, and which comprises nearly every important work on the language, geography, history and religion of China. This collection is offered to us for an amount which competent judges consider below the cost of the volumes, if purchased separately, besides which there are many

rare books among the number which we might be otherwise unable to buy at any price.

The undersigned would strongly urge the importance of securing this collection for Shanghai, not only for its special and intrinsic value, but as the nucleus for a public library, so favorable an opportunity to create which may be long in recurring.

The amount of money needed for the purpose, though not large, is beyond the limited means of the Asiatic Society, but they confidently appeal to the public for cooperation and assistance. For their own part they offer to charge themselves with the care and management of the books and to give the public the use of their own valuable collection. This is annually increased by the publications of the various literary and scientific bodies with whom the Society exchanges journals, and it would so far supplement the Wylie library as to need only a small sum to complete the acquisition of all printed books on China.

The special aim of this scheme is the creation of a public repository for every book or paper illustrative of the study of China and the Chinese. So far, however, as funds admit, it is proposed to collect useful books regarding the neighbouring countries of ultra-gangetic Asia, and to add such scientific, philosophical and historical works as will make the library valuable to the more general reader or student. It is believed that the library, once fairly started, will never fail to obtain active support from our own community, while it may also rely to some extent on the known liberality of governments to similar undertakings.

The basis on which subscriptions are solicited is briefly as follows:—

All the money so obtained is to be applied to the purchase of books to form a public library, the property in which will be vested in Trustees under a deed specifying the general conditions of the foundation.

It is proposed to make the Council for the time being of the Asiatic Society the Trustees under the deed—the Society on their part undertaking to provide suitable rooms and a librarian.

Should the Asiatic Society lapse, or be unable or unwilling to continue the management of the Library, the trust to pass from their Council to the Consuls of Great Britain, France, Prussia, and the United States, and the Commissioner of Customs, a

majority of whom will nominate new Trustees with power to make the necessary arrangements in the interest of the Shanghai community.

The entire management of the library will be in the hands of the Trustees. It will however be obligatory on them, save in exceptional cases, to open the library for at least four hours every week, and to allow books to be borrowed by respectable residents or visitors under such restrictions as may be needed to prevent property from being damaged or lost.

Should sufficient subscriptions be obtained it will be possible to open the library to the public early in May of this year.

F. B. FORBES,	} Committee of the China Branch of the Royal Asiatic Society.
W. H. MEDHURST,	
A. MICHIE,	
F. B. JOHNSON,	

II.

Report of Committee appointed for the consideration of the expediency of publishing a re-print of the Chinese Repository.

The Committee have met with serious hindrances in the way of preparing a conclusive report upon the expediency and practicability of publishing a re-print of selected portions of the Chinese Repository. The chief of these has arisen out of the difficulty experienced in so shaping the several engagements of the members of the Committee as to admit of a combined survey of that valuable work. They can consequently present but a partial report of what has been effected.

Mr. Forbes has completed the preliminary work of classifying the contents of the twenty volumes of the Repository under three heads; namely, "re-print," "condense," "omit." His work is now being revised by Mr. Medhurst.

The result so far (and it may be accepted as a fair indication of what may eventually be determined upon by the Committee) goes to prove that a complete selection of the most valuable information comprised in the Repository may be condensed and republished within the compass of say three volumes of from six to seven hundred pages each. Preference is being given to articles above average merit upon geographical, topographical,

historical, classical, and philological subjects. State papers likewise are to receive attention in most cases, and journals, itineraries and notices, literary and general, as well as translations, will have selections made from them, or will be condensed as it may be found expedient. Journals of occurrences and miscellaneous notices will need pruning to a very great extent. Religious papers as well as biographies of a purely religious character, together with missionary intelligence will be almost entirely eliminated.

The above will give a fair idea of what has been effected by the Committee so far, and they must crave the indulgence of the society until they are in a position to put their labours into such a shape as to merit the approving judgment of the Members.

W. H. MEDHURST,
F. B. FORBES,
CHAS. W. GOODWIN, } *Committee.*

III.

Report of the Committee appointed by the Council of the North-China Branch of the Royal Asiatic Society to promote the exploration of the old and new Channels of Hwang Ho.

Your Committee was appointed at a Council meeting on the 25th August last to aid Mr. Ney Elias in organising his expedition.

Your Committee lost no time in conferring with Mr. Elias on the subject of his journey, and the nature of the exploration to be undertaken, the feasibility of the various parts of the general plan, the means to be employed, and the probable cost, and all other matters of that kind were fully discussed and considered.

The result was the following appeal to the public for the necessary funds, which were estimated by Mr. Elias at \$800.

YELLOW RIVER EXPLORATION.

The Council of the North-China Branch of the Royal Asiatic Society deeming it desirable in the interests of Science and Commerce that an exploration of the new channel of the Yellow River should be undertaken, have entrusted the task to Mr. Ney Elias, and have appointed the undersigned a Committee to carry out the preliminary arrangements.

It is proposed to explore and map out the Yellow River from the point where it leaves its old bed to *Tieh-mên-kwan*, about 80 miles from the present mouth of the river, from which point to the sea its navigability has been

ascertained. Also, if time and opportunity permit, to examine the port of Haichow and the Coast in the vicinity of the old mouth of the Yellow River, although this is more properly the duty of Ships of War.

Mr. Elias will take with him a full complement of the requisite instruments for making astronomical observations, and will be accompanied by an efficient Assistant and Interpreter. Mr. Elias will of course not limit himself to the precise duty indicated above, but will endeavour to procure and furnish to the Society and the public as much general information as can be obtained along the route.

The cost of the expedition is estimated at about \$800, and as the Society is not in a position to furnish any portion of the funds required, this appeal is made to the liberality of the public for the necessary supplies. The Committee, thinking that the object is one which will commend itself to the community generally, trust that the amount required to give effect to their plans may be readily obtained.

A. MICHIE,
F. B. FORBES, } *Committee.*
G. THIN,

Of the above estimated amount Tls. 565.81 have been collected as per accompanying subscription list, and the exact amount has been expended leaving no balance either for or against the Committee. The accounts are submitted herewith.

Mr. Medhurst, H. B. M.'s Consul, on the application of the Committee took advantage of his visit to H. E. Vice-Roy Tséng at Nanking in September last to obtain for Mr. Elias a special pass-port available for 6 months. The Committee desire to express their thanks to Mr. Medhurst for his valuable assistance in this matter.

Mr. Elias in company with Mr. H. G. Hollingworth left Shanghai fully equipped for the journey on the 24th September last, and returned on the 20th December having been completely successful in establishing the course of the Hwang Ho, from the point where it has broken through the old bank near Kai-fung-foo to its embouchure in the gulf of Pechili. Several important points have been fixed by astronomical observations, the river has been carefully sounded, its navigability or otherwise ascertained; and many other matters of great general interest accorded. All this will be laid fully before the Society at an early date. Circumstances did not admit of Mr. Elias's proceeding to the old mouth of the Hwang Ho, nor did it appear from the enquiries made that much information was likely to be got there.

The Committee have much pleasure in saying that so far as they are able to judge from a close inspection of Mr. Elias's

journals and maps he has discharged the task allotted to him in a thoroughly efficient manner, and that he has done as much towards forwarding the Society's objects as the modest means at his command would permit. The thanks of the Society are also due to Mr. Hollingworth who rendered valuable assistance to Mr. Elias, and who has placed his journal at the disposal of the Society.

IV.

Copy of letter from the Secretary of the Treasury to Major Crossman, R.E., offering site for new building.

Sir,

The Lords Commissioners of Her Majesty's Treasury have had before them your letter of April 17th enclosing copy of a letter addressed by H. M.'s Consul at Shanghai to Sir Rutherford Alcock on behalf of the North-China Branch of the Royal Asiatic Society, requesting that a strip of ground belonging to Her Majesty's Government adjoining the present Consular Gaol at Shanghai may be granted to the above Society for the purpose of building a Library, Museum and Lecture room.

I am to state that My Lords have communicated with the Secretary of State for Foreign Affairs and that his Lordship has expressed his full concurrence in the proposed grant of land.

My Lords are therefore pleased under the very special circumstances of the case to approve of the grant of the piece of land on the terms and conditions stated in your letter, viz:—that the Society hold the ground at present at a nominal rent, and in the event of the remainder of the property being sold, that their Lordships hand it over in fee-simple to the Society on condition that it never be diverted from the purpose for which it is granted; and should the Society be dissolved, or circumstances occur which might prevent the erection of any building within three years, that it should then revert to Her Majesty's Government.

I am, &c.,

(Signed,) G. SCLATER BOOTH.

To

Major CROSSMAN.

True Copy.

(Signed,) J. P. MUNRO FRASER,
1st Assistant.

Treasurer's Report.

I am sorry to have to call attention to a balance to the Society's Debit in the accompanying financial statement. I have collected during the year \$80 arrears, \$610 subscriptions for 1868, and \$10 for the present year, leaving about \$200 more to come in, principally from non-resident members.

The expenditure contrasts favourably with the previous year's report, being nearly Tls. 200 less, from this however the rent will have to be deducted; still, at the end of this year, I have every reason to hope that with an increased number of members, we shall be in a very flourishing condition.

W. B. PRYER,
Treasurer.

SHANGHAI, 4th February, 1869.

BALANCE SHEET OF THE Nanyang-Chung Branch of the Royal Asiatic Society.

Dr.

FOR THE YEAR 1868.

Cr.

RECEIPTS.		\$		DISBURSEMENTS.		\$	
		cts.	Tls.	cts.	Tls.	cts.	Tls.
To Balance to credit of last account				By Amt. paid on Printing account...			
" Sales of Transactions.....			30 07	do, Mr. Bishop			496 51
" Subscriptions	705	00	8 52	do, Sundry Expenses..			22 80
" Balance due Treasurer,.....			534 75				96 45
			42 42				
			615 76				615 76

SHANGHAI, 4th February, 1869.

Audited and found correct,

J. P. BISSET.

LIST OF MEMBERS.

HONORARY.

Sir Rutherford Alcock, K.C.B.	W. H. Medhurst.
D. B. Robertson, C.B.	Rev. J. Legge. D.D.
Captain Shadwell, C.B.	A. F. Marques Pereira.
Sir John Davis, K.C.B. Bart. F.R.S.	J. R. C. do Amaral.
Professor Stanislaus Julien.	Sir Harry S. Parkes, K.C.B.
Sir John Bowring, L.L.D. F.R.S.	S. Wells Williams, L.L.D.
T. F. Wade, C.B.	G. F. Seward.

CORRESPONDING.

Rev. J. Edkins, B.A.	Rudolph Lindau.
W. Lockhart, F.R. C.S.E.	Raphael Pumpelly.
D. J. Macgowan, M.D.	Dr. Bastian.
Captain Wild.	L'Abbé Mermet de Cachon.
M. N. Rodert.	Dr. F. H. Hance.
Dr. Pompe Van Meerdevort.	A. Wylie.
R. Swinhoe.	Rev. J. Schereschewski.
Monsgr. de la Place.	D. Hanbury.
Rev. W. Muirhead.	J. C. Hepburn, M.D.
Rev. A. Williamson.	Rev. S. R. Brown.
Rev. Griffith John.	Dr. B. Jenkins.
Rev. G. Moule.	Lieut. M. C. Sampaio.
Rev. T. McClatchie.	D. B. McCartee, A.D. M.D.
Rev. Josiah Cox.	Lieut. F. da Silveira.
Rev. W. A. P. Martin, D.D.	Lieut. Col. Gordon.
Rev. A. P. Happer, D.D.	John Fryer.
B. Hobson, M.B.	

LIFE MEMBER.

Admiral Sir James Hope.

RESIDENT.

John Major.
J. P. Tate.
R. I. Fearon.
Wm. Gamble.
J. Johnston, M.D.
T. W. Kingsmill.
Wm. Remé.
E. Koch.
F. A. Groom.
C. W. Goodwin.
Wm. Tarrant.
C. J. King.
A. A. Krauss.
H. P. Hanssen.
F. B. Forbes.
G. P. Grant.
Rev. C. H. Butcher.
Wm. Saunders.
J. Battison.
E. Milsom.
E. J. Hogg.
Major Crossman, R.E.
W. A. Hague.
C. de St. Croix.
F. H. Balfour.
W. B. Pryer.
R. J. Forrest.
J. G. S. Coghill, M.D.
E. Holdsworth.

J. P. Bisset.
O. B. Bradford.
A. E. Rosenthal.
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L. Cameron.
F. Torckler.
G. B. Dixwell.
T. Kroes.
A. Robinson.
C. Dillon.
E. A. Reynolds.
Jas. Gilfillan.
W. H. Gracie.
G. Thin, M.D.
A. da Silveira.
H. Mylne.
A. Michie.
E. Cunningham.
A. J. Little.
H. Beveridge.
F. C. Sibbald, M.D.
F. B. Johnson.
J. B. Robertson.
Ney Elias.
James Jeffreys.
T. B. Rennell.
Yung Wing.
G. R. Corner.

NON-RESIDENT.

T. Hanbury.
A. Heard.
H. Hobson.
R. Hart.
E. C. Bowra.

J. G. Murray.
T. Sampson.
P. J. Hughes.
T. Adkins.
A. W. Corner.

T. Dick.	H. G. Hollingworth.
J. M. Canny.	Capt. Blakiston.
H. A. Sidford.	A. Howell.
J. M. Brown.	F. P. Knight.
G. Whitfield.	M. C. Morrison.
P. Giquel.	W. T. Lay.
O. Brown.	T. Watters.
A. R. Hewlett.	Hon'ble A. Burlingame.
W. H. Fittock.	A. G. Reid, M.D.
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Rev. J. Innocent.	H. D. Williams.
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C. Thorne.	T. Sutherland.
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G. Jamieson.	C. Alabaster.
F. Kleinwächter.	S. A. Viguier.
G. Deschamps.	W. Probst.
E. C. Taintor.	A. Meyer, M.D.
Augustine Heard, Jr.	E. Whittall.
W. Bushell, M.D.	A. C. Dulcken.
Genl. C. W. Legendre.	C. A. Winchester.
R. W. Little.	F. Youde.
W. P. Mangum	T. T. Cooper.





JOURNAL

OF THE

NORTH-CHINA BRANCH

OF THE

ROYAL ASIATIC SOCIETY.

NEW SERIES No. V.
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SHANGHAI:
A. H. DE CARVALHO, PRINTER & STATIONER,
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ARTICLE I.

NOTE SUR LES PETITES SOCIÉTÉS D'ARGENT
EN CHINE.

PAR MR. G. EUG. SIMON,

Consul de France à Ningpo.

DANS aucun pays du monde assurément, le si fécond principe d'association ne reçoit de plus fréquentes applications qu'en Chine. On s'associe à la ville, on s'associe à la campagne. Les riches capitalistes s'associent pour constituer de puissantes maisons de banques; les petits cultivateurs s'associent pour acheter le bœuf qui doit seconder leurs travaux; les marchands besogneux s'associent pour fonder des maisons de commerce plus importantes; le gamin qui vient d'obtenir de la générosité des passants quelques sapèques (1) court les associer aux aumônes recueillies par d'autres mendiants, et reparait bientôt chargé d'un panier de fruits ou de pâtisseries qu'il revend à ces mêmes passants; le mandarin que travaille le désir d'avancer en grade, associe ses amis ou ses parents à sa destinée, en leur empruntant les sommes dont il aura besoin pour faire le voyage de la capitale et se rapprocher des dispensateurs des grâces, sommes qu'il leur rendra avec des intérêts proportionnés à la faveur qu'il aura obtenue. Les mères de famille s'associent pour vêtir leurs enfants; les domestiques associent leurs économies pour faire un petit commerce et finissent par devenir de gros négociants (2). On s'associe pour un an, on s'associe pour un mois, pour huit jours!

(1) Une sapèque vaut un demi-centime environ.

(2) On peut citer maint négociant Chinois, aujourd'hui 2 et 3 fois millionnaires, qui ont commencé par être simples domestiques.

On s'associe entre parents, on s'associe entre amis, entre voisins, entre inconnus, en sorte que dans une province de 25 à 30 millions d'habitants il n'y en a peut être pas mille, qui n'aient été, ne soient ou ne doivent être un jour associés, et que depuis cinq mille ans, les *Cent familles* (1) ont eu beau multiplier jusqu'au point où elles sont aujourd'hui, il n'en est pas moins vrai que dans cette masse effrayante de plus de 400 millions d'individus, il y a beaucoup moins d'individualités qu'on pourrait le penser. Il n'y a point de doute que ce ne soit une des cent raisons qui expliquent cette si longue et si forte vitalité de la société chinoise, l'ont rendu si florissante et maintiennent les Chinois dans une situation de bien être supérieure à celle des habitants de beaucoup, pour ne pas dire plus, de nos états de l'Europe.

Il y a des associations reconnues par les lois; ce sont celles qui ont pour but des entreprises d'une certaine importance; mais elles n'ont rien dit, et ne pouvaient rien dire de celles qui s'adressent aux infiniment petits, et se forment à chaque instant entre les faibles et les pauvres, sous le titre de *Hoeï-Tsien* ou sociétés d'argent. Il n'y avait qu'à les laisser vivre, et c'est ce qu'elles ont fait; aussi grâce à cette liberté et à cause des nombreux besoins en vue desquels ces associations se forment, on peut dire qu'elles fourmillent en Chine, et sauf quelques conditions communes, les règles d'après lesquelles elles fonctionnent varient au gré de ceux qui les composent.

Elles ont pour but principal d'éviter le fardeau des dettes fixes et portant intérêt, et leur avantage consiste à procurer tout d'un coup à celui qui en a besoin, une somme relativement considérable qu'il ne paie qu'en détail, moyennant un intérêt léger, quelquefois nul.

Ce sont donc suivant les statuts en usage dans ces sociétés, tantôt comme on le verra, des sociétés d'assistance mutuelle, conciliant avec la bienveillance et la gratuité des services, le mobile souvent plus efficace de l'intérêt personnel; tantôt des sociétés d'emprunt, avec le système de l'amortissement rendu accessible aux particuliers et aux plus humbles, tandis qu'en Europe il n'est encore que je sache, appliqué que par les grandes compagnies.

Le grand obstacle qui s'oppose chez nous à ce que ce système

(1) C'est le surnom que les Chinois aiment à donner à leur nation.

entre dans la pratique des individus, est je crois le long-temps nécessaire à l'action incessante des intérêts, à un taux déterminé; les sociétés chinoises l'évitent, et me paraissent même offrir à chacun de leurs membres une séduction assez forte; c'est que chacun recevra à tour de rôle le fonds social, et que ce tour change chaque année ou à chaque réunion. On pourra en juger par l'examen des statuts et des tableaux de quelques unes de ces sociétés qui sont le plus en vogue parmi celles qui existent. Mais avant de l'entreprendre, je dois dire comment elles se forment, et signaler les conditions générales qui sont le plus souvent observées; je n'aurai plus ensuite qu'à indiquer quelques particularités de chacune de ces sociétés.

Lors donc qu'un cultivateur a besoin d'argent, soit pour acheter un champ, soit pour acheter un cheval, soit pour payer le loyer de sa terre ou de sa maison;

Lorsqu'un jeune laboureur veut commencer à cultiver pour son compte et a besoin qu'on lui avance le fermage d'un champ et le prix de ses instruments aratoires;

Lorsqu'un commis marchand veut devenir marchand, ou qu'un marchand veut profiter d'une bonne occasion, pour étendre son petit commerce;

Lorsqu'un enfant ou un jeune homme se trouve arrêté dans ses études par sa pauvreté ou par celle de ses parents;

Lorsqu'une pauvre mère de famille doit, soit marier sa fille, soit pourvoir à quelque dépense extraordinaire;

Lorsqu'un employé subalterne veut, pour avoir un emploi mieux rétribué, gagner les bonnes grâces de son chef, ou bien lorsqu'il passe d'une fonction à une autre qui l'oblige à quelques premiers frais d'établissement coûteux;

S'ils ont un parent ou un ami riche, ils lui exposent la nécessité où ils se trouvent, et ceux-ci leur prêtent généralement sans intérêt la somme demandée. Mais si la situation de fortune de ces parents, n'est pas telle qu'ils ne puissent s'adresser à eux sans les exposer à se gêner ou, à rougir d'être obligé de refuser, ou si l'on ne connaît que des personnes vivant de la même vie que soi-même, soumises aux mêmes vicissitudes, aux mêmes éventualités, on pressent ou l'on fait pressentir leurs dispositions, et après s'être ainsi assuré de leur assistance, on les convoque à un repas, et après leur avoir expliqué le but de la réunion, et les motifs de l'emprunt, s'ils sont approuvés, la société est constituée, et l'emprunt partagé également entre chacun des assistants, qui

s'engage en outre à apporter chaque année ou à chaque réunion, à la masse commune une quote-part déterminée.

On fixe aussi dans cette même séance :

1°. La durée de la société qui est ordinairement d'autant d'années qu'il y a de souscripteurs.

2°. Les statuts.

3°. Le titre de l'argent des lingots qu'on doit fournir (1) et la balance qui servira à les peser (2).

4°. On tire au sort l'ordre d'après lequel chacun deviendra dépositaire de la cotisation totale annuelle. Voici comment se fait ce tirage. On inscrit d'abord chaque nom sur un morceau de papier qui est plié et mis dans un sac. On les tire une première fois et chaque nom sortant reçoit un numéro. Ces numéros sont ensuite remis dans le sac et retirés. Ce dernier sort est définitif, et détermine aussi comme on le verra la cotisation annuelle. Il est entendu que pour la première fois, le No. 1 appartient de droit à celui qui a provoqué la formation de la société.

L'année suivante la réunion a lieu chez le No. 2 qui doit recevoir le prêt social et est obligé d'offrir un repas aux autres. Le No. 1 apporte sa cotisation plus l'intérêt fixé par les statuts, qui diminue la cotisation des suivants d'une somme proportionnelle.

La 3^e. année le No. 3 prend la place du No. 2 qui paie un intérêt qui s'ajoute à celui que continue à payer le 1^{er}. et diminue d'autant la cotisation des autres, et ainsi de suite jusqu'à ce que le dernier ait eu son tour après quoi la société est prorogée ou dissoute, et dans ce cas les quotes-parts sont rendues à chacun.

J'appellerai l'attention des hommes spéciaux sur les calculs, qu'ils saisiront d'ailleurs sans qu'il soit besoin de les exposer, d'après lesquels on a pu établir ces quotités différentes pour chacun suivant le temps pendant lequel il attend le prêt et fait ses avances, et le temps pendant lequel il en profite. Si compliqués qu'ils soient, ils sont cependant compris de la multitude, et

(1) Il n'y a pas de monnaie d'argent en Chine; ce sont des lingots, de poids et suivant les localités de titres différents. Il est donc très important quand on fait un marché de spécifier le titre de l'argent avec lequel les paiements s'effectueront. Le même objet peut se vendre moins de taëls (Once d'argent) à Pekin qu'à Shanghai, ce qui ne signifie pas toujours qu'il soit moins cher. Il faut savoir en effet que les lingots de Pekin sont d'argent presque pur.

(2) Les balances diffèrent en Chine selon la nature des objets à peser et selon les provinces.

me paraissent non moins que le jeu même des sociétés dont il est question ici, montrer sous un jour bien digne de remarque l'esprit et le caractère Chinois.

Si quelqu'un manque une année à apporter sa quote-part il perd toutes ses avances au profit du bénéficiaire de l'année précédente qui fait alors l'avance pour lui. Mais cela n'arrive presque jamais, parceque ces sociétés étant fondées sur l'honneur et l'amitié celui qui en violerait les conditions serait deshonoré et ne trouverait plus à faire partie d'aucune autre société d'assistance. Quand quelqu'un se trouve pressé d'argent, au lieu de pouvoir en verser, il obtient facilement qu'on lui cède le prêt, et s'il ne peut plus continuer, il cède ses avances et sa place à un autre qui n'est tenu de le rembourser qu'à l'expiration de la société.

L'on connaît maintenant tous les avantages de ces sociétés; au point de vue particulier des emprunteurs comme des prêteurs, elles facilitent les emprunts sans les rendre dangereux comme ils le sont par exemple dans certains de nos départements de l'Est de la France; elles provoquent sur les opérations en vue desquelles les emprunts sont faits, une critique amicale qui devient une garantie de succès ou un obstacle à l'emprunt: elles engagent à l'épargne par des moyens extrêmement puissants dans les mœurs chinoises; elles le rendent aussi plus facile.

Au point de vue général de la société elles accusent et font naître un esprit de bienveillance et de conciliation et de mutualité extrêmement heureux.

On ne reconnaîtra cependant pas toujours dans les tableaux qui vont suivre, la même justice et la même égalité, et d'abord dans le tableau No. 1; mais on ne peut empêcher que les meilleures choses ne soient contrefaites et dénaturées. Un dernier mot encore pour rappeler qu'en Chine le taux de l'argent toléré par les lois dans le commerce, est de 30 % par an pour les prêts ordinaires (1). A la campagne l'intérêt ne dépasse guère 12 ou 15 %. L'argent placé en fonds de terre ou en maisons, rapporte 9, 9½ et 10 %.

(1) Cette loi est tombée en désuétude en ce sens qu'on ne s'en souvient et qu'on ne l'applique qu'en temps ordinaire; mais en vertu de ce principe que l'argent est une marchandise, on en voit le taux s'élever jusqu'à 40, 50, et 60 % et même plus.

SOCIÉTÉ DE SOU-TCHEOU.

(Ainsi appelée parcequ'elle a pris naissance à Sou Tcheou-fou ville industrielle extrêmement importante de Chine, dans la province du Kiang-sou).

D'après les règles de cette société elle doit être formée de 11 associés; les réunions périodiques ont lieu de 10 en 10 mois, ce qui fait une série de cent dix mois et le fonds social entier est de cent taëls à recevoir successivement.

Ceux qui sont les premiers à profiter du prêt, donnent une quote-part plus forte que les derniers. En garantie de la somme qui lui est prêtée le bénéficiaire remet entre les mains du plus âgé des associés un titre de propriété de terre ou de maison sur le dos duquel il reconnaît avoir reçu la somme qui lui est prêtée; si dans la suite il ne peut satisfaire aux conditions de la société c'est à dire rendre par parties selon les statuts la somme qu'il vient de recevoir, la société jouit de cette propriété à ses risques et périls, mais elle ne peut la vendre; elle n'en a que l'usufruit.

Chacun doit assister en personne aux réunions, à moins qu'il n'ait renoncé à la société, et que du consentement commun il ne se soit substitué un remplaçant.

Afin de stimuler les associés et de les engager à être à l'heure dite au lieu indiqué pour la réunion, le bénéficiaire, dès que les $\frac{2}{3}$ des associés sont réunis, organise entr'eux une loterie de quatre ou cinq cents sapèques et elle est tirée immédiatement, en excluant les retardataires.

L'associé qui le premier a profité du prêt de 100 taëls, est tenu de rendre dans chacune des réunions suivantes, jusqu'à la dernière, 15 taëls, 5 tsienn (le tsienn = $\frac{1}{10^e}$ de taël) pour capital et intérêts qui font alors parties de la masse nouvelle. Il donnera donc en cent dix mois, cent cinquante cinq taëls pour 100 qu'il aura reçus, mais qu'il n'aura remboursés qu'en dix ans.

Le 2^e. associé qui ne jouira de cette masse que pendant cent mois donnera dans la première réunion, 15 taëls, 5 tsienn et dans chacune des 9 autres 14 taëls 5 tsienn, et donnera en tout 146 taëls.

Le 3^e. dans les 2 premières réunions paie 14 taëls 5, et dans les 8 dernières 13 taëls 5, en tout 137 taëls pour 100 taëls qui lui auront été prêtés pendant 9 ans, et ainsi de suite.

No. 2.

SOCIÉTÉ DE TCHÉ-KONG, FONDÉE PAR UN HOMME
HONORABLE DE CE NOM.

La somme à percevoir dans chaque réunion jusqu'à la 6^e. inclusivement est de 100 taëls. Dans la 1^{re}. réunion, chacun des associés moins le 1^{re}. apporte 10 taëls. Les associés ne reçoivent pas de numéros d'ordre. Le premier bénéficiaire est celui qui forme la société, le 2^e. est désigné par le sort avant la fin de la première réunion; le 3^e. par le sort avant la fin de la 2^e., et ainsi de suite. Le tirage se fait comme pour la société précédente du Kiang-sou, une première fois avec les noms, une seconde et dernière avec les numéros. La présidence de la société appartient au bénéficiaire. On détermine en commun le prix du repas qui sera offert à tour de rôle par chacun des bénéficiaires. Le No. 1 de la première réunion paie le premier et le deuxième repas, le second paie le 3^e. &c.

Celui qui arrive le premier aux réunions reçoit quatre cents sapèques du président et les autres 100.

Outre les 11 réunions dans lesquelles chaque associé reçoit successivement le capital social, il y en a une 12^e. dans laquelle personne ne reçoit et ne paie que son écot pour le dernier repas qui a lieu.

Le 1^{re}. associé est obligé de rembourser 20 taëls par an capital et intérêts compris. En 6 ans il a payé 120 taëls pour 100 reçus; ensuite il ne paie plus rien.

Le 2^e. reçoit donc 20 taëls du 1^{re}. et chacun des autres ne lui donnent que 8 taëls 8 tsienn 8 feun. Puis à la 3^e. réunion il donne ainsi que le 1^{re}. 20 taëls au 3^e. qui ne reçoit des autres que 7 taëls 5 tsienn. En 6 ans outre sa première mise de 10 taëls, il a payé 120 taëls ce qui fait 130 pour 100 reçus. Le 4^e. reçoit 20 taëls des 3 premiers, et des autres 5 taëls 7 tsienn 1 feun 6 lis; en 6 ans il a payé ses premières mises à savoir:

10 taëls	pour la 1 ^{re} . année
8.89	pour la 2 ^e . id
7.5	pour la 3 ^e . id

en tout 26 taëls 39, plus 120 taëls soit 146 taëls 39, pour 100 reçus.

Et ainsi du 5^e. et du 6^e. associé.

Mais les 7^e., 8^e., 9^e., 10^e. et 11^e. cessent leurs quotes-parts à partir de la 6^e. année inclusivement et ne paient les intérêts et le capital de 20 taëls que pendant, 5 ans pour le 7^e., 4 ans pour le 8^e., 3 ans pour le 9^e., 2 ans pour le 10^e., et un an seulement pour le 11^e. C'est ce dernier qui liquide la société.

Un certain nombre d'associés seraient d'après ce qui précède beaucoup plus chargés que les autres, mais on les en dédommage, et voici comment. Dès la 7^e. réunion (chacun étant obligé de rembourser 120 taëls en 6 ans), il y a un excédant de 20 taëls sur les 100 à prêter on divise donc ces 20 taëls entre les associés, même le No. 1.

A la 8^e. réunion on exclut le No. 2 de cette division, à la 9^e. le No. 3 à la 10^e. le No. 4, à la 11^e. le No. 5, ainsi qu'on le verra par le tableau A.

TABLEAU A.

Répartition par Année.					Sommes.
7 ^e . année.	8 ^e . année.	9 ^e . année.	10 ^e . année.	11 ^e . année.	
2	1	1	1	1	Taëls. 0.8
3	3	2	2	2	1.1
4	4	4	3	3	1.2
5	5	5	5	4	1.3
6	6	6	6	6	5.0
7	7	7	7	7	4.0
8	8	8	8	8	3.0
9	3	9	9	9	1.3
10	10	10	10	10	1.2
11	11	11	11	11	1.1
					20.0

10 NOTE SUR LES PETITES SOCIÉTÉS D'ARGENT EN CHINE.

A la 12^e. réunion, la société devant se dissoudre, il reste 120 taëls à partager, partage qui se fait d'après le tableau B. Sur cette dernière somme de 120 taëls, 2 taëls sont retenus pour payer le dernier repas.

TABLEAU B.

Numéros.	Sommes.
1	4.0
2	5.6
3	13.3
4	13.2
5	13.1
6	9.4
7	10.4
8	11.4
9	13.1
10	11.2
11	13.3
	118.0

TABLE DES SÉRIES DE LA SOCIÉTÉ DE TCHÉ-KONG.

1re. Réunion.	2e. Réunion.	3e. Réunion.	4e. Réunion.	5e. Réunion.	6e. Réunion.	7e. Réunion.	8e. Réunion.	9e. Réunion.	10e. Réunion.	11e. Réunion.	12e. Réunion.
Sommes versées au 1re. Associé.	Sommes versées au 2e. Associé.	Sommes versées au 3e Associé.	Sommes versées au 4e. Associé.	Sommes versées au 5e. Associé.	Sommes versées au 6e. Associé.	Sommes versées au 7e. Associé.	Sommes versées au 8e. Associé.	Sommes versées au 9e. Associé.	Sommes versées au 10e. Associé.	Sommes versées au 11e. Associé.	Réunion vide sommes versées.
Par le	Par le	Par le	Par le	Par le	Par le	Par le	Par le	Par le	Par le	Par le	Par le
10e. 100e. & 1000e.	10e. 100e. & 1000e.	10e. 100e. & 1000e.	10e. 100e. & 1000e.	10e. 100e. & 1000e.	10e. 100e. & 1000e.	10e. 100e. & 1000e.	10e. 100e. & 1000e.	10e. 100e. & 1000e.	10e. 100e. & 1000e.	10e. 100e. & 1000e.	10e. 100e. & 1000e.
2e. 10. "	1r. 20. "	1r. 20. "	1r. 20. "	1r. 20. "	1r. 20. "	1r. 20. "	2e. 20. "	3e. 20. "	4e. 20. "	5e. 20. "	6e. 20. "
3e. 10. "	3e. 8.89	2e. 20. "	2e. 20. "	2e. 20. "	2e. 20. "	2e. 20. "	3e. 20. "	4e. 20. "	5e. 20. "	6e. 20. "	7e. 20. "
4a. 10. "	4e. 8.89	3e. 20. "	3e. 20. "	3e. 20. "	3e. 20. "	3e. 20. "	4e. 20. "	5e. 20. "	6e. 20. "	7e. 20. "	8e. 20. "
5e. 10. "	5e. 8.89	5e. 7.5	5e. 7.5	4e. 20. "	4e. 20. "	4e. 20. "	5e. 20. "	6e. 20. "	7e. 25. "	8e. 20. "	9e. 20. "
6e. 10. "	6e. 8.89	6e. 7.5	6e. 7.5	6e. 3.334	5e. 20. "	5e. 20. "	6e. 20. "	7e. 20. "	8e. 20. "	9e. 20. "	10e. 20. "
7e. 10. "	7e. 8.89	7e. 7.5	7e. 7.5	7a. 3.334	7e. 3.334	6e. 20. "	7e. 20. "	8e. 20. "	9e. 20. "	10e. 20. "	11e. 20. "
8e. 10. "	8e. 8.89	8e. 7.5	8e. 7.5	8e. 3.334	8e. 3.334	8e. 3.334	9e. 3.334	10e. 3.334	11e. 3.334	12e. 3.334	13e. 3.334
9e. 10. "	9e. 8.89	9e. 7.5	9e. 7.5	9e. 3.334	9e. 3.334	9e. 3.334	10e. 3.334	11e. 3.334	12e. 3.334	13e. 3.334	14e. 3.334
10e. 10. "	10e. 8.89	10e. 7.5	10e. 7.5	10e. 3.334	10e. 3.334	10e. 3.334	11e. 3.334	12e. 3.334	13e. 3.334	14e. 3.334	15e. 3.334
11e. 10. "	11e. 8.89	11e. 7.5	11e. 7.5	11e. 3.334	11e. 3.334	11e. 3.334	12e. 3.334	13e. 3.334	14e. 3.334	15e. 3.334	16e. 3.334
100. "	100. "	100. "	100.012	100.004	100. "	120. "	120. "	120. "	120. "	120. "	120. "

SOCIÉTÉ DE TCHAO-KONG, OU DU VÉNÉRABLE TCHAO.
PARTICULIÈRE AUX FEMMES.

Il ne s'agit point ici de fortes sommes. On n'apporte point d'argent mais des sapèques; et les mises de fonds périodiques sont au plus de cinq ligatures (1). Les réunions ont lieu d'année en année et les numéros d'ordre sont désignés par les dés.

Celui qui a profité du capital social annuel doit le rendre avec l'intérêt prescrit dans les quatre années suivantes après lesquelles il ne donne plus rien. Ceux qui n'en ont pas encore profité ne donnent de quotes parts que pendant les quatre premières années.

Le bénéficiaire offre un repas aux autres, et ce repas ne doit pas coûter plus de 50 sapèques c'est à dire 0.25 f. environ par personne; mais il est évident que ce repas se réduit à une ou deux tasses de thé avec quelques gâteaux.

Le 1^{re}. associé reçoit dans la première réunion soit 50 ligatures (cinq de chaque des 10 associés) et en rend 60 en 4 ans, 15 chaque année.

Le 2^e. associé en reçoit donc 15 du 1^{re}. et des 9 autres, 3 ligatures 890 sapèques en tout 50; il les rend seulement en 4 ans.

Le 3^e. reçoit 30 ligatures des 2 premiers, et des 8 autres, 20; en tout 50.

Le 4^e. reçoit des 3 premiers 45,000 sapèques et de chacun des 7 autres, 713 sapèques; en tout 50 ligatures, qu'il rend comme les précédents en 4 années.

Le 5^e. reçoit à la 5^e. réunion, des 4 premiers 60 ligatures (15 chacun) mais il n'en garde que 50 pour lui; les 10 autres sont également partagées entre le 7^e. et le 8^e. associé.

Dans la 6^e. réunion le 1^{re}. associé ne paie plus rien et le 6^e. reçoit des 4 autres 60 ligatures dont il garde 50 pour lui et divise les 10 excédantes entre le 6^e. et 9^e. associé.

(1) On appelle ligature mille sapèques enfilées par le trou carré dont elles sont percées et séparées par centaines au moyen de noeuds. Chaque centaine de sapèques est donc la 10^e. partie de la ligature, et la ligature vaut un taël ou un once pesant d'argent; soit 8 francs.

A la 7^e. réunion les 10 ligatures excédantes sont divisées enret le 1^{re}. et le 2^e.

A la 8^e. entre le 4^e. et le 5^e.

A la 9^e. entre le 7^e. et le 8^e.

A la 10^e. entre le 6^e. et le 9^e.

A la 11^e. entre le 10^e. et le 11^e.

A la 12^e. réunion nommée *Hui-Che* ou réunion vide 40 des 60 ligatures provenant du dernier emprunt sont divisées entre les associés selon le tableau C, et des 20 autres on donne 5 au bénéficiaire pour préparer un grand repas, et on donne 1 ligature et 500 sapèques aux autres.

TABLEAU C.

Numéros.	Sommes.
2	5. „
3	8.890
4	6.390
5	7.140
6	2.100
7	2.100
8	2.100
9	2.100
10	2.100
11	2.100
	40.020

TABLES DES SÉRIES DE LA SOCIÉTÉ DE TCHAO-KONG.

[illegible]

No. 4.

TSI-HIENN-HOUEI (SOCIÉTÉ DES SEPT SAGES).

AINSI APPELÉE PARCEQU'ELLE A ÉTÉ

FONDÉE PAR SEPT SAGES.

Sa durée est variable mais elle est d'ordinaire de sept années et la mise de fonds annuelle est de 20 taëls répartis entre les sept associés, moins celui qui la provoque et ne donne rien la 1^{re}. année. La quote part de chacun des six à la 1^{re}. réunion est de 3 taëls, 3 tsienn, 3 feuns, 3 lis, en tout 20 taëls remboursables en 4 ans pour chacun des 4 premiers.

A la 2^e. réunion le No. 1 rend six taëls et les autres ne donnent plus que 2 taëls, 8 tsienn.

A la 3^e. réunion les Nos. 1 et 2 rendent chacun 6 taëls, et les autres ne donnent plus que 2 taëls.

A la 4^e. les Nos. 1, 2, et 3 rendent chacun 6 taëls, et les autres ne donnent plus que 6 tsienn, 6 feuns, 6 lis.

A la 5^e. les 4 premiers rendent chacun 6 taëls, en tout 24, dont 20 sont prêtés au No. 5, et les 4 autres divisés entre les Nos. 3, 4, 5, et 6 de façon que le 3^e. reçoit 1 taël 666, le 4^e. 2 taëls 333, le 5^e. 0 taël 666 et le 6^e. 333 sapèques. Le 1^{re}., le 2^e. et le 7^e. ne reçoivent rien. C'est ce qu'on appelle reversement du capital.

Dans cette 5^e. réunion les Nos. 6 et 7 ne paient plus rien.

A la 6^e. réunion le 1^{re}. a fini ses paiements et les Nos. 2, 3, 4 et 5 versent chacun 6 taëls, en tout 24 dont 20 sont prêtés au No. 6 et les 4 taëls excédants sont partagés entre les Nos. 3, 4, 5 et 6 de la manière suivante:

Le No. 3 reçoit 1 taël „

„ 4	„ 1	„ „
„ 5	„ 1	„ 214
„ 6	„ 0	„ 636.

A la 7^e. réunion les Nos. 1 et 2 ont cessé de payer, les Nos. 3, 4, 5 et 6 rendent chacun 6 taëls, en tout 24 dont 20 sont prêtés au No. 7 et les 4 excédants divisées entre les Nos. 3, 4, 5 et 6, comme suit:

Le No. 3 reçoit 0 taël 866

„ 4	„ 0	„ 535
„ 5	„ 1	„ 660
„ 6	„ 0	„ 933

Total 3 taëls 994.

TABLES DES SÉRIES DE LA SOCIÉTÉ DE TSI-HIENN-HOUEL.

1re. Réunion.		2e. Réunion.		3e. Réunion.		4e. Réunion.		5e. Réunion.		6e. Réunion.		7e. Réunion.	
Sommes versées au 1re. Associé.		Sommes versées au 2e. Associé.		Sommes versées au 3e. Associé.		Sommes versées au 4e. Associé.		Sommes versées au 5e. Associé.		Sommes versées au 6e. Associé.		Sommes versées au 7e. Associé.	
Par le	Taëls 10e. 100e. & 1000e.	Par le	Taëls 10e. 100e. & 1000e.	Par le	Taëls 10e. 100e. & 1000e.	Par le	Taëls 10e. 100e. & 1000e.	Par le	Taëls 10e. 100e. & 1000e.	Par le	Taëls 10e. 100e. & 1000e.	Par le	Taëls 10e. 100e. & 1000e.
2e.	3.333	1r.	6. "	1r.	6. "	1r.	6. "	1r.	6. "	2e.	6. "	3e.	6. "
3e.	3.333	2e.	2.8	2e.	6. "	2e.	6. "	2e.	6. "	3e.	6. "	4e.	6. "
4e.	3.333	3e.	2.8	3e.	6. "	3e.	6. "	3e.	6. "	4e.	6. "	5e.	6. "
5e.	3.333	4e.	2.8	4e.	6. "	4e.	6. "	4e.	6. "	5e.	6. "	6e.	6. "
6e.	3.333	5e.	2.8	5e.	6. "	5e.	6. "	5e.	6. "	6e.	6. "	7e.	6. "
7e.	3.333	6e.	2.8	6e.	6. "	6e.	6. "	6e.	6. "	7e.	6. "		
		7e.	2.8	7e.	6. "	7e.	6. "	7e.	6. "				
	19.998		20. "		20. "		20.001		24. "		24. "		24. "

No. 5.

SOCIÉTÉ DU KIANG-SOU.

Constituée pour 11 ans entre 11 associés au capital de 100 taëls par année.

L'intérêt est nul et les sommes à rendre par chaque bénéficiaire sont tellement combinées, que si le No. 11 a fourni sa quote part pendant 10 ans avant de jouir du prêt, il en est dédommagé en ce que cette quote part a été plus faible que celle des autres et qu'il ne restitue plus rien.

Ainsi du No. 10 et des autres.

No. 6.

SOCIÉTÉ DE TCHE-KONG.—*Bis.*

L'intérêt est très modique.

Les associés excepté le premier en sont exemptés presque en entier.

La somme annuelle est de 60 taëls.

Les réunions sont annuelles.

No. 7.

SOCIÉTÉ COMMUNE ET SIMPLE.

C'est la plus commune parmi les pauvres et les mendiants. Le capital social est souvent représenté par du riz, ou une autre céréale de consommation habituelle. Le nombre des associés est ordinairement de 11, mais on peut l'augmenter à volonté.

La durée de la société ne peut pas être de plus de 11 ans ni de moins de 11 mois au commencement desquels la société se réunit. On détermine dans la première réunion la quantité, d'argent, de riz, d'orge, de froment, ou autre matière de première nécessité, à fournir par les associés. Le bénéficiaire annuel ou mensuel paie le repas. Quelquefois le 1^{re}. associé fournit les 11 repas, mais alors il est exempté de tout intérêt. Dans les sociétés où les mises sont par trop minimes, le thé remplace le repas. Le numéro de chacun n'est tiré au sort qu'au commencement de chaque réunion. Le tableau suivant suppose une mise annuelle totale de 50 taëls.

Chaque année le capital croît selon une progression arithmétique dont le rapport est 2, au profit du bénéficiaire, mais comme les 5 derniers ne paient que pendant cinq ans, ce sont eux en réalité qui profitent de cet intérêt. Les cinq premiers y perdent au contraire. Le 6^e. ne gagne ni ne perd.

TABLES DES SÉRIES DE LA SOCIÉTÉ COMMUNE ET SIMPLE.

1re. Réunion.	2e. Réunion.	3e. Réunion.	4e. Réunion.	5e. Réunion.	6e. Réunion.	7e. Réunion.	8e. Réunion.	9e. Réunion.	10e. Réunion.	11e. Réunion.
Sommes versées au 1re. Associé.	Sommes versées au 2e. Associé.	Sommes versées au 3e. Associé.	Sommes versées au 4e. Associé.	Sommes versées au 5e. Associé.	Sommes versées au 6e. Associé.	Sommes versées au 7e. Associé.	Sommes versées au 8e. Associé.	Sommes versées au 9e. Associé.	Sommes versées au 10e. Associé.	Sommes versées au 11e. Associé.
Par le	Par le	Par le	Par le	Par le	Par le	Par le	Par le	Par le	Par le	Par le
et fractions.	et fractions.	et fractions.	et fractions.	et fractions.	et fractions.	et fractions.	et fractions.	et fractions.	et fractions.	et fractions.
5. "	7. "	7. "	7. "	7. "	7. "	7. "	7. "	7. "	7. "	7. "
3e. "	5. "	5. "	5. "	5. "	5. "	5. "	5. "	5. "	5. "	5. "
4e. "	5. "	5. "	5. "	5. "	5. "	5. "	5. "	5. "	5. "	5. "
5e. "	5. "	5. "	5. "	5. "	5. "	5. "	5. "	5. "	5. "	5. "
6e. "	5. "	5. "	5. "	5. "	5. "	5. "	5. "	5. "	5. "	5. "
7e. "	5. "	5. "	5. "	5. "	5. "	5. "	5. "	5. "	5. "	5. "
8e. "	5. "	5. "	5. "	5. "	5. "	5. "	5. "	5. "	5. "	5. "
9e. "	5. "	5. "	5. "	5. "	5. "	5. "	5. "	5. "	5. "	5. "
10e. "	5. "	5. "	5. "	5. "	5. "	5. "	5. "	5. "	5. "	5. "
11e. "	5. "	5. "	5. "	5. "	5. "	5. "	5. "	5. "	5. "	5. "
50. "	52. "	54. "	56. "	58. "	60. "	62. "	64. "	66. "	68. "	70. "

SÉRIES DE LA SOCIÉTÉ DE NINGPO.

No. 1—14,500 sapèques.

„ 2—13,500 „
 „ 3—12,500 „
 „ 4—11,500 „
 „ 5—10,500 „
 „ 6— 9,500 „
 „ 7— 8,500 „
 „ 8— 7,500 „
 „ 9— 6,500 „
 „ 10— 5,500 „

Le No. 10 paie pendant 10 ans 5,500 sapèques soit 49,500; il recevra 100,000 sapèques moins 5,500 soit 94,500.

Le No. 9 recevra 100,000 — 6,500 = 93,500

„ 8 7,500 = 92,500

„ 7 8,500 = 91,500

„ 6 9,500 = 90,500

„ 5 10,500 = 89,500

„ 4 11,500 = 88,500

„ 3 12,500 = 87,500

„ 2 13,500 = 86,500

„ 1 14,500 = 85,500

ARTICLE II.

NOTES ON THE COAL FIELDS AND GENERAL GEOLOGY
OF THE NEIGHBOURHOOD OF NAGASAKI.

By THOS. W. KINGSMILL, Esq.,

Corresponding Secretary.

As I believe no attempt has yet been made to throw light on the age of the Coal fields at Japan the following notes may have an interest. The rock at Nagasaki itself may be called a coarse volcanic grit; large blocks of green-stone lying embedded in a mass of debris of every size and shape. Here and there these rocks seem to be penetrated by dykes of more modern igneous rocks, but the main masses though consisting of the ruins of plutonic formations show little sign themselves of volcanic action. The thickness of these grits must be very great: their base may be seen in a valley near the village of Tomats, and from that they seem to stretch as far at least as Tokeets some 13 miles distant. They form hills about 1,800 to 2,000 feet in height and seem to have a nearly constant dip at a very small angle to the W.N.W. To a visitor the most striking feature of these rocks is the peculiar manner in which the denuding forces have acted. Though as above stated the strata are nearly horizontal the rock may be seen jutting up into fantastic needles and castle like structures. Some times a few feet from the edge of a precipice a gigantic needle will be seen rising far above the neighbouring trees, while again on the top of a rounded mass will appear a pile of jutting rocks almost like the bastions and walls of a mediæval fortress; and one mass on the road to Tokèets bears such a fantastic likeness to the head of an Egyptian Sphinx as to have earned the name of the "Giant's Head."

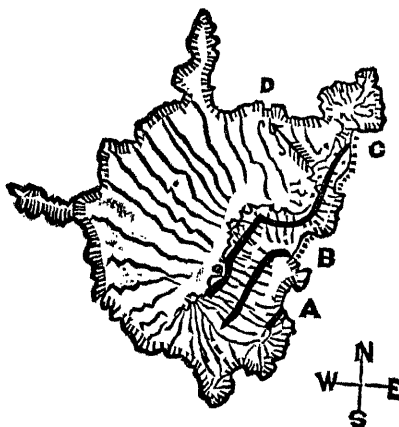
The lowest portion of this series may be seen in a valley to the South of Tomats mentioned above; here at a turn in the road soft shales appear dipping W.N.W. at an angle of about 15 degrees. A few steps further an excavation, driven in on the

slope of the strata and propped with wood, points out the entrance to an old coal mine, now abandoned; about a quarter of a mile on another similar is met with. Whether these mines were ever profitably worked or not I was not able to learn; but the expense of draining them in the native manner by means of flight of small water wheels turned by the feet of boys must have been excessive. At this spot I could obtain no fossils; but about a half mile further, near a tea house at the summit of a path leading to the sea, a bed of soft grey shale cropped up by the way side; in this was a beautifully preserved leaf bed containing in abundance the leaves of dicotyledonous plants. The colouring matter even in some instances remained, while the structure and veining were beautifully marked. Below these beds at the other side of the valley, at the side of a small gorge known as the "Mermaids Dell" the lower rocks were seen to be mica schists altered and contorted, on which the newer formations rested unconformably.

Lying in a S. E. direction from this spot, at the entrance of the Bay of Nagasaki are the islands at Tako-sima, Koyaki and Iwo-sima; the first of these is about half mile in diameter and forms an outlier of the coal series of the district; the rocks dip to the N. W. and expose on the S. E. face a fine section of the coal bearing strata. These are for the most part composed of a coarse concretionary sand stone of a sickly yellowish brown colour showing large concentric patches stained with iron. The whole series is more or less fossiliferous; stems, leaves and trunks of trees or stains of carbonaceous matter occurring all through the series. One large boulder lying on the beach disclosed the branching stem of a tree converted into coal, while all round the debris cast out from the mines fragments of trunks of all sizes up to 10 or 11 inches in diameter were lying. The interior of these stems was generally converted into a silicious stone retaining traces of structure, while the bark and the outer wood were for the most part carbonized.

At various depths in the mass, but in more abundant quantities near the coal seams, were leaf-bearing beds of blackish shale containing likewise traces of carbonized branches; at intervals too occurred bands enclosing nodules of impure iron stone, these bands however seeming not to exceed a few inches in thickness.

In the island of Tako-sima three principal beds of coal seemed to occur in a thickness of about 750 feet; of which the upper seemed to produce the best coal, and had been worked to a considerable extent. The island forms a sort of irregular triangle, the east face where the edges of the beds have been exposed by denudation presenting a steep escarpment, while the western portion of the island descends to the sea in a gentle slope corresponding with the dip of the



beds. The outcrop of the beds is marked on the rough sketch in the margin, C representing the highest and most worked seam. Towards the extreme north easterly angle of the island the outcrop of this seam approached the sea level, below which on its dip towards D it inclined; and here the lowest mine of the series had been worked, which served besides as a drainage shaft for the portion of the seam lying above it in level. The mode of working adopted was most peculiar, and in view of the lie of the beds probably the most unsatisfactory possible; long galleries heavily timbered to support the roof and sides were driven in from the outcrop on the slope of the beds, or at a declining angle about 12° , these passages were not even straight but twisted about from one side to the other to avoid obstacles on their passage. As the work went on the coal was simply extracted from the head of the gallery, which in every case was supported and lined with heavy masses of wood; no attempt was made by connecting passages to extract the coal at either side, the miners simply working ahead as long as they could remove the debris and coal from the extremity. Some of these descending adits driven into the hill were at least 400 yards in length, and yet at their extremity they might probably have been reached by a vertical shaft of 50 yards

in depth. The shafts were generally from 5 feet to 5 feet 6 inches high, and about the same width at bottom, tapering towards the top, though their size varied according to the circumstances of the case. The coal seams themselves were irregular in thickness, the coal appearing rather to lie in pockets than in an even seam, in some places I was assured that it was 8 feet in thickness while in others it dwindled down to 2 or 3 feet; thick layers of shale occurred in some places in the middle of the seam dividing it into two or more portions; sometimes the coal appeared altogether to cease, nothing but a wall of rock existing at one side, the result probably of slight shifts.

As stated above, the lowest shaft was used to some extent as a drain for the upper portion of the seam; its mouth opened about 60 feet over the level of the sea, but it seemed to dip some considerable distance under that level. The method of drainage adopted was as primitive as the other operations about the mines. Naked boys or men seated on a cross beam drove with their feet light water wheels about 5 feet in diameter; floats fixed on these lifted the water some two feet over a dam into the next level where the same operation had to be repeated, each lift was thus somewhat under 2 feet; I calculated there were eighty or ninety of these wheels at work in this shaft. To carry off the water from the upper shaft were small adits penetrating the rock but whether natural or artificial I could not say. The workmen said they were in hopes of getting this mine dry after some weeks work, when they would remove the wheels and work it further till the water again stopped them.

At intervals at the side of this shaft chambers for the accommodation of the workmen had been formed; when I passed down they had all retired for a midday rest, and seemed quite happy and comfortable, lying down asleep or chatting to one another. Although this mine was much more crooked than the others and there was no artificial means of ventilation, the air though damp was pure. Throughout the whole of the mines there was no escape of dangerous gases; indeed the little actual depth below the surface at which they were worked naturally left a sufficiency of natural channels for their dissipation. At the south east angle of the island the lowest visible seam **A** cropped out on the

beach, but had never been worked, probably owing to the expense of drainage, it lying altogether below the sea level; the second seam **B** was only partially worked, the uppermost **C** being the favourite.

On examining carefully, some time after my visit, the fossils obtained by me on the spot, I was much surprised to find them agreeing in character with those from the leaf bed at Tomats; the rocks are more compact than those at the base of the Nagasaki grits, but this identity in fossils points them out as portions of the same system, whether upper or lower the time and opportunities at my disposal did not allow me to ascertain. The leaves especially were beautifully preserved, bearing a considerable magnifying power. They seemed to consist entirely of dicotyledons in the specimens in my possession, though many of the trunks seem to belong to the palm tribe; ferns and the more familiar plants of the carboniferous formations in China and Europe were entirely absent, nor did I notice conifers or cycads. The flora seemed to bear a close resemblance to that of the "Brown Coal" of Germany the likeness extending to the families represented.

As dicotyledinous plants made their first appearance, so far as is already known, in the later secondary formations, and as even at this epoch the flora still retained for the most part its archaic physiognomy, being largely composed of the older cycads, ferns, calamites and conifers, we can hardly place the geological age of these rocks earlier than the Chalk of Europe. Indeed from the similarity of its fossils to the recent flora of the neighbourhood, it seems more probable that we must class the formation as belonging to the early Tertiaries.

In the neighbouring island of Koyaki coal mines have also been worked in similar rocks. Iwo-sima seems to consist of similar deposits, while the same formation appears to extend to the Goto Islands where large masses of shale and sand-stone dipping at low angles towards the W. and S. are seen at both sides of the Fukuye channel. The sand stone used generally for building purposes at Nagasaki is evidently quarried from the same formation; it is of a disagreeable yellow brown colour and of a marked concretionary structure, large reddish spheroidal masses appearing everywhere in the mass, giving the walls built of it a most unpleasant appearance of insecurity.

Should the other coal fields of Japan prove to belong to the same series, we shall have in Japan one of the newest coal fields of any extent in the world; deposits of carbonaceous matter of equally late date occur indeed in many localities in Europe and America but they are generally of extremely limited area, and rarely if ever appear in the form of true coal, being usually in the state of lignite. Compared with the neighbouring country of China a curious contrast appears; in China most of the rocks belong to the palæozoic or early secondary ages; the later deposits in the central and sea board provinces at least being confined to a few sand stones and clays; while in the island of Kiusiu deposits of solid rock thousands of feet in thickness have been formed and elevated in comparatively recent times.



ARTICLE III.

NOTIONS OF THE ANCIENT CHINESE RESPECTING MUSIC.

A COMPLETE TRANSLATION OF THE YOK-KYI,
OR MEMORIAL OF MUSIC, ACCORDING TO THE IMPERIAL EDITION.*

BY DR. B. JENKINS.

CHAPTER I.

*The Source of Music: Sounds proceed from the
emotional nature.*

As to the source of Music, it is from some emotion of the human mind that every musical air takes its rise, and these emotions are produced by exterior objects. As soon as an object strikes one, an emotion is produced, and the effect is manifested by sounds. As sounds thus respond to sentiments, a great variety is produced, and from this variety, what are called musical airs are formed. These airs being enriched with harmonious sounds, and accompanied with battle-axes, and standards formed of feathers and long hair,—the insignia of military power, and implements of military manœuvre,—that is called music.

It is from airs that music is composed: but the source of music lies in the mind of man, as it is affected by outward objects. Therefore, when the mind is affected by sentiments of sorrow, the sounds elicited are pungent and hasty: when pleasure is experienced, the sounds drawn forth are mild and slow: when joy is experienced, the sounds enlarge and expand: when anger is felt, the sounds become coarse and wild: when the mind is subdued by respect, the sounds become direct and clear: when the mind is influenced by love, the sounds become harmonious and tender. These six sorts of emotion are not naturally inherent in the mind of man, but they are excited by exterior objects. Therefore it is that the ancient emperors watched over with so much care whatever might influence the mind of man.

* Read before the Society on 9th June, 1868.

It was on this account that the ancient emperors imposed ceremonial-rites, for instructing and directing the will of man,—that they established music, for the purpose of harmonizing sounds,—instituted laws for the purpose of effecting unity in human action,—and attached penalties, in order to obviate disorder. In the rites and in music, in penalties and in statutory regulations, there was but one object, and that was to produce a uniformity in the sentiments of the people, and to educe the doctrine of law and order in government.

It is in man's mind that every musical air finds its source: The passions being moved within, are consequently manifested without in sounds. When these sounds form a composition, that is called an air. When good order prevails, the airs breathe calm and joy,—the government then is well-tempered. When disorder prevails, the airs are filled with murmuring hate and impatient anger,—then government is perverse. When a nation is about to fall, its airs breathe sorrow and reflection,—the people are in straits: all which goes to prove that there is an intimate relation between the nature of the musical airs and the condition of the government.

The note *k'ing* appertains to the sovereign; the note *sh'ing* relates to the magistrates; the note *ky'oh* relates to the people; the note *chz* to work, and the note *yü* to things. If there be no disorder in these five classes, then the airs meet with no defect or obstacle. If the note *k'ing* be not in order, the sound will be wild,—like the sovereign who is proud and conceited. If the note *sh'ing* be confused, then the sound is not correct,—like the minister who is not regular in his duties. If the note *ky'oh* be irregular, then its sound will be mournful,—like the murmurings of the people under oppressive government. If the note *chz* be confused, then its sound will be piteous,—like the cries of unceasing involuntary servitude. If the note *yü* be out of order, then the sound will be weak,—like the weakness of the people overladen by the burden of excessive taxation. If the whole of the five notes be not in order, then there will be a confusing and overstepping of the proper bounds, which may be called carelessness. Thus the bounds between the respective spheres of the governing and the governed being mutually overstepped, the country is sure to fall, without any prospect of a restoration.

Every air finds its source in the mind of man. Music is intimately connected with the essential relations of beings. Thus,

to know sounds, without knowing airs, is to be like birds and beasts. To know airs, without knowing music, is the province of the vulgar herd of mankind. It is the province of the superior man alone to understand the principles of music.

Therefore sounds are studied, in order to know airs; airs are studied in order to understand music; and music is studied, in order to know how to govern. In this manner political science is complete. Thus, we cannot discuss the nature of airs with a man who does not understand sounds; and we cannot discuss music with one who does not understand airs. But a knowledge of music is closely akin to that of the ceremonial-rites. When the ceremonial-rites and music are obtained, it may be said that virtue is possessed,—for the word virtue may be defined—a possession.

But the magnificence of music does not demand that we should execute airs perfectly; as the rite of offerings does not demand that an exquisite flavor should be given to the viands offered. Even the lute which is played in the temple of ancestors has only cords of red silk and a few perforations in the sounding-board. There one person gives the keynote of the tune, and only three others respond thereto,—thus leaving out other parts of the harmony. In the ceremony of offering viands, water is preferred to wine; the sacred vases contain only raw fish, and the soup has no seasoning,—so leaving out many of the flavors.

Thus it is that in instituting the rites and music, the ancient emperors did not seek to satisfy entirely the appetites of the mouth and stomach, of the ears and eyes, but they sought to teach the people to hold the mean in the love of what was good and aversion toward what was evil, in order to lead men into correct principles.

Man is naturally peaceable. This is his heaven-conferred nature. Influenced by external things, carnal desires are excited. It is by the approach of external things that the mind acquires knowledge, and that liking and aversion are manifested. If sentiments of liking and aversion have no proper rules of constraint within, man will be led into error by the influence of outward things, and cannot return to personal virtue, and then the original virtuous nature implanted in him by Heaven will be destroyed.

When men are ceaselessly moved by external things, and their likings and aversions have no proper rule of restraint, then it is

only necessary for the object to be presented, and the man is influenced. Now, man being thus moved by outward objects, and the heavenly principle natural to him being destroyed, he becomes a constant victim to his fleshly desires; hence arises that rebellious and deceitful heart which is manifested, with its carnal and rebellious workings in act. Wherefore it is that the strong cheat the weak; the many oppress the few, the crafty take advantage of the simple; the bold affright the timid; the sick are not cared for and nourished; the infirm aged and tender youth, the solitary widower and the lonely orphan, do not obtain what their condition properly claims: courses which belong only to a state of the greatest disorder.

Therefore the ancient kings, in instituting rites and music, have fixed a mean to the inevitable tendencies of man. The coarse hempen garments, sobbing and tears, establish a rule in the different sorts of mourning. The bell, the drum, the shield and battle-axe, serve to regulate joy and pleasure. The rites of marriage, of assuming the cap of manhood, and taking the hair-pin, regulate the relations and the distinctions between man and woman. The ceremonial feasts between princes, and those between agriculturists, fix the relations of intercourse in their coming together.

The rites mark the classes and their reciprocal duties in the minds of the people: music harmonizes the different sounds among the people: laws require the observance of ceremonial rites and musical regulations, and punishments restrain their infraction: rites, music, punishments and government extend everywhere, and no one is permitted to oppose their requirements. Thus magisterial rule is complete.

CHAPTER II.

*Music Discussed: In what it agrees with,
and differs from, the Rites.*

It is by music that unity of sentiment is obtained. It is by the rites that the requisite distinctions in society are established. Unity produces reciprocal affection, and distinctions produce appropriate respect. When music is in excess, the affections are not kept within due bounds; and when ceremonial rites are

in excess, it tends to estrangement. The legitimate tendency of music and the rites is, to produce harmony of sentiment and elegance of manners.

In establishing a ritual etiquette, the noble and the ignoble receive their appropriate rank; but in uniting all by means of music, concord between the higher and lower classes is produced. It is by the manifestation of liking for what is good, and aversion toward what is evil, that a distinction is put between the wise and those devoid of wisdom: it is by chastisement that a restraint is put upon the oppressor; and it is by raising the meritorious to dignities, that an equitable administration is indicated. It is by benevolence that the ruler produces reciprocal affection, and by justice that he corrects all impropriety. Thus it is that good order is to be carried out among the people of the nation.

Music comes from within, and the rites find their accomplishment without. As music comes from within, it is peace-inspiring: as the rites arise from without, they are cultivating and adorning. Music is by nature easy; and the rites generally present no difficulties.

When music prevails, then all reproaches cease. When the rites flourish, then there are no contentions. When the empire is governed by condescension, it may be said that it is by music and the rites that such a result is attained. When oppressors of the people do not arise; when the feudal lords assist, and submit to, the emperor; when the implements of warfare are laid aside; when the five kinds of punishment fall into disuse; when there are no grievances on the part of the people, and the emperor is not irritated,—in such a state of things, it is because music generally pervades the nation. When the sovereign fulfils the duties of filial piety, and makes clear the distinction between the aged and the young, so as to incite by his example a respectful disposition in all who live within the four seas,—when the sovereign acts thus, then it may truly be said that the rites are widely disseminated.

The harmony of music is like that between heaven and earth. The gradation in the rites is similar to that which exists between the different beings in heaven and on earth. It is because of harmony that beings do not perish: and it is because of the gradation, that certain sacrifices are offered to Heaven, and different ones to Earth. In the visible world there are the rites and music, and in the unseen world there are the spirits of the

dead, and the spirits deified. Such being the case, if music and the rites prevail in the empire, every body is respectful and affectionate.

In the rites there are many details to be attended to, but the object of all is to promote respectfulness: in music there are a variety of compositions, but their object is to promote mutual affection. The business of the rites and of music is, then, similar. Therefore the enlightened sovereign carries on what his predecessors commenced; yet matters in detail take the impress of the times, and the names of musical compositions change to suit the exigency created by the merits of those in whose honor they are performed.

The bell, the flageolet, the drum, the sonorous stone, the plumed-standard, the flute, the shield and the battle-axe, are the implements used in musical performances. The crookedness and uprightness of the person, the inclination and elevation of the head; the relative position of the ranks of persons; the measure of the forward or retrograde steps; the slowness or celerity of the movements,—these are the exterior appliances of music. The sacrificial vases called *fú*, *hwei*, *tsú*, and *teu*,—according to the established regulations—are the vessels of the ritual ceremonies. To ascend and descend, to take one's place above or to wait below; the assuming a reverential demeanor, and showing the beauties of one's habiliments, these are the elegancies of the rites.

He who knows the essential nature of music and of the rites, can execute. He who knows their external elegancies can imitate. He who by his own personal knowledge can execute, may be accounted to be possessed of the noblest faculties: and he who can imitate the productions of others may be called intelligent:—so, those who are intelligent, and those who are possessed of the noblest faculties, may be called imitators and inventors.

The harmony of music is like that which exists between heaven and earth. The order in the rites resembles that which exists between the different beings in heaven and on earth. By reason of that harmony all beings are produced. By reason of that order and gradation all beings have their separate functions. Music is an imitation of what the heavens originate. The rites are an imitation of the laws existing on the earth. If the laws be faulty, the result is disorder; if the executive be faulty, the result is oppression. Understand thoroughly the heavens and the earth, and then you will be able to practise successfully the rites and music.

The spirit of music consists in discussing the requirements of the component parts, without injury to the exigencies of any one of them. Joy and affection are its outward affairs. The maintenance of the mean, and undeviating rectitude, are the substance of the rites: seriousness, veneration, respect, and deference, are its laws. So the rites and music have a broad significance, and are not confined to the metals and stones of which their instruments and utensils are composed, and that produce only sounds and airs,—these being only things used in the ancestral temple, and in the sacrifices to the tutelary gods of the land and of grain, and in the services offered to the mountains and rivers, and to the spirits of the dead and of those who have been deified—things altogether within the province of the mass of the people.

CHAPTER III.

The Principles of Music: How the Rites and Music were settled and regulated.

When the sovereign has accomplished a work, he has a musical composition made to perpetuate the remembrance thereof. When his government is firmly established he regulates the ceremonial-rites. If the work be great, the music is perfect. Should the government extend everywhere, the rites are complete. The manœuvring of shields and battle-axes does not constitute perfect music. The offering of boiled flesh in sacrifice does not constitute an all-pervading sacrifice.

Under the Five Emperors,* as the epochs differed in nature, so the music was not uniform. Under the Three Kings, as the ages differed, so the same rites were not followed. Music when carried to excess produces sorrow: and coarseness in the rites induces a perfunctory execution of them. But to give profound attention to music without inducing sorrow, and to give full attention to the rites without inducing carelessness,—it is only he who is possessed of the highest mental and moral endowments that can do thus.

*Those styled the Five Emperors, were *Füh-hy*, whose date is put at B. C. 2,852: *Shun-nung* 2,737: *Hwang-ti* 2,697 B. C.: *Yau* 2,357; and *Shun*, 2,255 B. C.

Those styled the Three Kings are: *Yü*, whose reign is placed at B. C. 2,205: *T'ang*, B. C. 1,766; and *Wun* and *Wü* as one reign, B. C. 1,134 to 1,115.

The heavens are high above, the earth is far below, and the multitude of creatures which occupy the interval between them have the corresponding gradation in their modes of existence; hence the institution of the rites fixes the distinction between the honorable and the mean among men. Heaven, earth and all things unceasingly revolve, and their combined action gives rise to all creations and transformations. So, music attunes and harmonizes the emotional nature of man,—it combines the virtues and nourishes them,—and thus it flourishes. In spring everything puts forth; in summer everything increases—an emblem of benevolence, which incites to the love of mankind. In autumn we gather in our harvests, and in the winter we store them up—distinguishing their qualities—an emblem of justice, which gives to every one what is proper to his relation. Benevolence is akin to music, for it unites and harmonizes; and justice is akin to the rites, for it decides and apportions what is befitting.

Music is intimately connected with the harmony of the sentiments. It follows the superior principle in nature (the *yíng*) and is directed toward heaven. The rites distinguish what things are proper; they depend upon the inferior principle in nature (the *yín*), and are directed toward earth. Therefore, the ancient sages created music, to respond to heaven; and instituted the rites to respond to earth. When the rites and music are executed with perfection, heaven and earth equally accomplish their respective duties.

The heavens are high above, and the earth is below. The distinction of sovereign above and subject below is in imitation thereof. So mountains and valleys are spread over the earth, and it is in imitation of them that we have the distinctions of noble and plebeian among men: and the principle of movement and the principle of repose constantly succeed each other appropriately, as the lesser and greater rites make the requisite distinctions. The five social relations (of king and minister, father and son, husband and wife, elder and younger brother, friend and companion) collect together the individuals in relative order: the rites separate things according to their species—and this is because the decreed destiny is not alike for all. There are various figures in the heavens, and various forms on earth, and these serve as models *for ornamenting costumes and constructing buildings*—so the distinctions established by the rites are like those which exist between heaven and earth.

The subtle fluid (*ky'i*) of earth mounts upward, and the subtle fluid (*ky'i*) of heaven descends: the two principles (*yin* and *yáng*) come mutually into contact: the heavens and the earth act reciprocally on each other. To move beings there is the thunder: to make them spring there are the wind and rain: to keep them in motion, there are the four seasons: to warm them up, there are the sun and moon. By means of these, all beings have their birth and development: so, then, the music of the sage is like the harmony existing between heaven and earth.

When the transformations of heaven and earth are untimely, then there is no birth. When the requisite distinctions between male and female are lost sight of, then confusion is complete. So, when music is untimely, harmony is violated; and when the rites fail to make the relative distinctions of duty, disorder results.

The influence of the rites and music reaches to heaven, and pervades the earth; it runs through the *yin* and *yáng*—the inferior and the superior principles of nature,—and even pervades the invisible world of souls and spirits; it reaches to the highest elevation and most extreme distance, and sounds the most impenetrable depths.

Music holds the place of the great original principle—Heaven: the rites hold the place of created beings—Earth. In showing itself without repose music is like heaven, which is in perpetual motion: in showing themselves immovable, the rites resemble earth—which is without motion. On the one part unceasing movement, on the other constant repose—all phenomena being embraced in the interval between the two,—therefore it is that the men of the most exalted virtue speak only of the rites and music—for the doctrines of music and the rites are like the doctrines of heaven and earth.

CHAPTER IV.

The uses of Music to the Nation: Music a recompense of Virtue.

In ancient times the emperor *Shun* made a lute with five silken strings, in order to chant the Ode "*Nán fáng*" or "South wind." *Kwéi*, his minister, began to regulate the sort of music which, as a reward, was allowed to the feudal barons. Therefore it is that the emperors, in determining the music that might be used as a

reward by the feudal lords, recompensed the virtues of which they were possessed. If their virtue was great,—if they taught the people to esteem highly agriculture, so that the harvests were ripe at the proper time, then a musical recompense was granted to them. So, when a feudal baron laboured assiduously in the good government of the people, the successive files of performers allowed in the evolutions accompanying his music, extended to a great distance; while he who was remiss in the government of the people had but a very limited allowance in the files of performers accompanying his music. Hence it was only necessary to glance at the display accompanying a baron's music in order to ascertain the amount of his virtue,—as it was only necessary to hear the posthumous designation of one deceased, in order to know what his actions were during his life.

The music of YAU, called the *Ta-chang*, displayed the virtues of that ancient emperor. The music of HWANG-TÍ, called *hyien-chz*, shows that all was complete under that emperor. The music of SHUN, called the *Shau*, intimates the continuance of the virtues of his predecessor. The music of Yü, called *hya*, indicates the greatness of Yü. The music of the YIN and CHEU dynasties exhausts all that appertains to human affairs.

The law of heaven and earth is such, that if the cold and heat do not come at their appropriate season, maladies result: if the wind and rain have not their due limits, famine results. Now, instruction is to the people just like the cold and heat: if it be not given at the proper time, great damage results. Public affairs are to the people just like the wind and rain: if the proper limits be not observed, no good results. So the ancient emperors have given music for instruction, in order to imitate the lessons of heaven in their government of the empire, and the people, likewise, have imitated the virtuous example of the sovereign.

By the use of grain we may nourish hogs, and also produce wine. The proper use of wine is not necessarily productive of evil and misery; but when it is so taken as to be productive of quarrels and lawsuits in abundance, then it becomes the cause of distress. Wherefore, in the times of the ancient kings, wine being used in the ceremony, manifold compliments between host and guest were passed at each cup; but that they could drink for a whole day without intoxication, this was the warning of the ancient kings against the unhappy effects of wine. Wherefore feasts are for the enjoyment of the guests: music presents the image of virtue: the rites impose obstacles in the way of excess.

Thus, whenever the ancient emperors had any occasion of great mourning, they did not fail to observe the rites, in order to moderate their grief; whenever any occasion of great rejoicing occurred, they did not fail to observe the rites, in order to restrain their joy: thus it is that the rites alone restrain grief and joy within their proper bounds.

CHAPTER V.

Music described: Its nature and effects.

Music is one of those things in which men of the highest virtue and endowments find pleasure, for it has the power of making the people good, of moving men in their inmost depths, and of changing the entire manners of the age. Therefore the ancient emperors promulgated music as a branch of instruction.

The people possess corporeal organs and intellectual faculties, which constitute their nature; but grief and joy, pleasure and anger, are emotions of the mind which are not constant. If an emotion arise, excited by some exterior object, then the emotion of the mind is immediately manifested without. Therefore it is that when we find the monarch to be a person of small capacity, and the airs composed dry, hasty, abrupt and meagre, we may conclude that the people are thoughtful and sorrowful. When the ruler is liberal, cordial and considerate, and the airs are full, broad, elegant and orderly, we may conclude that the people are prosperous and joyous. When the ruler is rude and fierce, and the airs begin with sounds which are coarse and shrill, conclude with angry and wild sounds, and have loud and full sounds in the centre, it may be determined that the people are firm and courageous. When the ruler is pure and upright, and the airs compassionate, courteous, stately, dignified and solid, it may be inferred that the people are rigid and respectful. When the ruler is high-minded and liberal, and the airs flowing and harmonious, it may be concluded that the people are tenderly affectionate. When the ruler is wild and unsettled in disposition, and crooked and depraved in character, and the airs produced are winding, jerking and hasty, it may be concluded that the people are abandoned to the lowest passions.

Therefore it is that the ancient emperors took the sentiments of human nature as the essential basis of music, and that they

examined the rules of different sounds and instruments, in order to determine what was most suitable for the different rites. Music is calculated to assist the harmony of the creative energy (*ky'ü*), and to direct human actions in the paths required by the five relations. It prevents a too great development on the part of the superior principle (*yáng*) in nature, and a too great retirement on the part of the inferior (or *yin*) principle: it prevents the too firm in character from running into anger, and the too mild in disposition from running into fear. These four effects extend and unite in their proper mean in order to manifest themselves immediately without, all quietly holding their respective places, without at all infringing one upon the other.

Afterward, the ancient emperors established colleges and literary degrees; they gave development to music, the rules of which they had fixed, and the beauties of which they studied, in order to consolidate natural virtue; they united and harmonized the weaker and stronger sounds; they gave the beginning and the end their relative importance, so as to produce in music a representation of human affairs. In short, they so managed that the doctrine which regulates the duties between near and distant relatives, between the noble and the plebeian, between the elder and the younger, between males and females, were plainly displayed upon all these points in music: wherefore it is said that by means of music the profoundest depths may be seen.

When the land is worn out, plants and trees cannot attain their growth; when the waters of the rivers are disturbed, the fish and turtles cannot attain their proper size; when the creative energy is decayed, then the natural productions cannot attain perfection; when the age is corrupt, then good principles are buried, and music has become depraved.

Therefore it is that when the music is in a disordered state, though there be pleasure, there is no quiet enjoyment; and there is a neglect of the proprieties of life, a floating away with the current of disorder, and a forgetfulness to come back to the fundamental principles of good order. In this state of unbridled license, when difficulties press, then the baser passions rule, moving the lowest propensities, to the destruction of the harmony of virtue; wherefore the sage despises and abandons such music.

CHAPTER VI.

*The forms of Music: Effects of Depraved
and of Correct Music.*

Every depraved sound moves the mind of man, and immediately the vicious inclinations respond thereto. When the vicious inclinations are incited to action, then depraved music flourishes. When well-regulated sounds move the mind of man, then the good inclinations in man respond. When the good inclinations are set in action, harmonious music flourishes. Every beginning has, then, its legitimate response; the disobedient and the depraved, the crooked and upright, each reverts to its legitimate department, and the natural law of all things is, that each, according to the law of its species, acts one upon the other.

Wherefore, the endeavor of the sage is, to return toward those sentiments which nature implanted in him at his birth, so as to rectify his thoughts. He compares the nature of things, in order to perfect his actions. So, he will not permit lewd sounds nor unchaste sights to have access to his ears or eyes; nor will he permit vicious music or depraved rites to have access to his heart; he will not permit the influence of idleness and depravity to affect the demeanor of his person; but he so acts that his ears, eyes, nose, mouth,—his intellectual faculties and his bodily organs,—all follow a course of rectitude, in order to accomplish what is his legitimate duty.

Then he puts forth sounds and airs, to which are added the graces of the lute and the lyre; evolutions are made with the shield and battle-axe; the flourishes with the tall standards ornamented with plumes, and with those having long flowing hair, give additional ornament,—while these are followed up with the sound of pipe and flute. It is thus that the sage strives to throw splendor upon his sublime virtues—of which music is the exponent,—and to assist the harmony of the four seasons, in order to bring into bold relief the intimate relations existing between music and all created things.

Thus, the splendour of music is the image of heaven; its amplitude is the image of earth. The beginning and the end are the image of the four seasons. The circuitous evolutions accompanying the music, are the image of the wind and rain. The five notes, imaged in the five colors, form a harmonious whole, in which there is no confusion. The eight winds follow after the

twelve notes of the gamut, in which there is no disorder. The different degrees of the musical scale attain a certain number, which is without any variation. The weak and the strong sounds combine perfectly. The beginning and the end mutually produce each other. The air and the accompaniment, with their clear or cloudy sounds, succeed each other as conductors.

Therefore it is, that when music is generally taught, the duties of the five relations are thoroughly comprehended; the ears and the eyes are quick and penetrating; the animal spirits and the emotional nature are in perfect calm; public manners and customs are reformed, and the whole empire enjoys profound tranquility.

Wherefore it is said that music is joy. But for the sage, joy consists in the acquisition of virtue, while the joy of the mean man consists in gratifying his carnal appetites. In regulating the appetites by means of virtue, there is no disorder in them; but in yielding to the appetites, by a complete forgetfulness of virtue, man is thrown into that state of doubtful uncertainty where there is no true joy. Hence it is that the superior man reverts toward those sentiments of good which are his by natural endowment, in order that he may rectify his thoughts, and that he may extend the sphere of music, so as to complete his instruction,—for if the sphere of music be extended, the people are directed toward virtuous methods, and then the happy effect of the sovereign's virtue may be seen.

Virtue is the great principle of human nature. Music is the budding forth of virtue. Metals, stones, silk and bamboo furnish material for musical instruments. Verse serves to express the thoughts: singing modulates the voice: the evolutions set the countenance in movement. These three things take their origin in the mind, and the instruments of music follow the outward expression.

Hence it follows that the internal nature of music is deep, and that its external manifestation is brilliant. It may be compared to that expansive energy which wonderfully produces all things. The harmony however, must be concentrated inwardly, in order to flourish outwardly, for music is a thing which cannot be falsified.

Music is the product of the heart's emotions. Sounds and airs are the body of music. The elegance and the measure are the ornaments of the sounds. In the producing of music, the sage begins by moving his own heart, and then strives to reproduce

this emotion in music; and lastly, he regulates the adornments. For this reason it is, that the evolutions are preceded by sounding the drum, in order to awake to preparation. Three paces are then taken, by way of prelude. The drum is again struck, as the signal for moving forward. When the performers are in disorder, they are recalled to their respective places by the globular bell; and, how rapid soever the evolutions may be, no unfortunate accident occurs, and how profound soever the music may be, there is nothing concealed. When in enjoying music alone, one enjoys it inwardly, and does not grow weary of the pursuit of virtue,—then all the virtues which music nourishes are exalted, and of all that might be coveted, nothing is selfishly appropriated. Thus the sentiments of the sage appear, and propriety is clearly established. Let music be generally disseminated, then virtue is duly honored—the noble man is led thereby more to the love of good, and the mean man thereby hears his errors reprov'd. Hence it is said—among the doctrines for educating a people, music is of great importance.

Music is an overflowing of the sage's virtue upon the people, while the rites are the recompense of gratitude. Music is the rejoicing in our virtuous origin; the rites make us go back to the fountain of our benefits. Music illustrates virtue; the rites are a return of gratitude—by these we turn back to the source of our benefits. Thus what is called the great, or golden coach, is the emperor's chariot; and the standard of the emperor has a dragon and nine pendants; and the divining-tortoise of the emperor has a blue or black border. The chariot is followed by a herd of oxen, and a flock of sheep, from which ceremonial presents are made to the feudal barons.

CHAPTER VII.

*The Sentiments of Music: The forms may change—
the sentiments change not.*

Music takes hold of those sentiments of human nature which are not subject to change. The rites are founded in principles not liable to variation. Music unites men by general sympathies—the rites distinguish men by their different claims. So, when we say—the rites and music, we mean—accord with the sentiments of mankind.

It is the province of music to make us investigate the radical nature of things, and to cause us to comprehend the various transformations taking place. It is the province of the rites to make manifest sincerity, and to drive away dissimulation. The rites and music are akin to the nature of heaven and earth: they penetrate the virtue of the gods, bringing down the gods which are above, and sending up the spirits from below; and subjecting to our decision those recondite and manifest principles which rule in all things, and govern the respective duties of father and son, of sovereign and subject.

Therefore it is, that when great men seek to elevate appropriately the rites and music, heaven and earth will respond to their efforts. The heavens and the earth then delight in perfect accord; the inferior (*yin*) and superior (*yáng*) principles of nature mutually harmonize: the celestial and terrestrial fluids cover and nourish all things: afterward plants and trees grow in abundance: the flower-buds burst into bloom: the birds throng and flutter about: quadrupeds come forth in abundance: insects awake from death to life: the birds deposit and hatch their eggs: hairy animals bring forth and nourish their young: among the viviparous there are no miscarriages; and among the oviparous there are no cracked eggs which fail to produce their young; and all this is nothing but the harmony of music as it reverts upon the objects of creation.

What is called music does not consist in the sounds *huang cháng* and *ta lyii*, nor yet in the stringed instruments, the song or the flourishing of standards,—for in music these things stand last in importance; wherefore the evolutions are performed by young lads. The preparations of the sacrificial or festal table, the display of vases and dishes, the arrangement of the vases for rice and for meats, the art of ascending and descending in conformity with the ceremonial rules, all these are matters of secondary importance in the rites, wherefore there are persons employed to take the charge of these things. The music-master understands the nature of sounds and of verse; and for this reason, with his face turned to the north, he attends to the playing of his instrument, without giving his attention to the recondite meaning of the music. The people employed in the ancestral temples understand the ceremonial in use in the temples, but do not fathom the deeper significance of the rites, wherefore they only attend to keeping in the rear of the living representative of the ancestor.

The officers attending to sepulchral ceremonies, are acquainted with the rites appertaining thereto, but their business is confined to keeping behind the person who conducts the mourning.

Hence it is, that the perfecting of virtue occupies a superior rank, while mere talent in the exercise of any art takes an inferior place. He who practises virtue always goes in advance, and the man of business follows. Wherefore it is that the ancient emperors placed the one above and the other below, putting the one before, and the other after; and thus it was that they succeeded in ruling the empire.

CHAPTER VIII.

Ancient and Modern Music: The Duke of Wéi's conversation with Tsz-hya thereon.

Prince WUN, of the kingdom of WÉI, inquired of Tsz-HYA, saying—"Can you tell me how it is that, while attired in ceremonial robe and cap, I am listening to ancient music, I am constantly afraid of going to sleep, while, when listening to the airs of *Ch'in* and *Wéi* I experience not the least weariness?"

Tsz-HYA replied—"Now in ancient music the advance movement is made in an orderly manner, and the retrograde likewise,—there is accord, exactness—hence expansion. The stringed instruments, the gourd instruments, and the metal-tongued instruments, all follow the strokes of the drum. The beginning of each piece is announced by the drum. When the performers return confusedly to their respective places, it is to the sound of the *nau*—or globular bell. Any disorders arising, are corrected by blows on the *siang*—or husk-sack. Movements which are too precipitous are corrected by striking on the *yú*—or barrel-drum. The sage who fully comprehends these things, discourses upon and eulogises ancient music: but this is not all; he makes use of it to renovate his own person, thereby favorably affecting his own family and the whole empire. These are the effects of ancient music.

"Now in the new music of the present age, there is no order either in the advance or retrograde movement; it overflows with lascivious sounds, in which the hearer sinks down, without stopping. The dwarfish and monkey-like performers mix up the sexes, and forget the distinctions of father and son: such

music is entirely unfit for discussion, and cannot be spoken of with ancient music. Such are the effects of modern music.

"Now, O prince, that about which you were inquiring is music, but you are fond of the airs. Now, although music has considerable affinity with airs, yet it is not the same thing."

Prince WUN then said—"I venture to ask how that is?" Tsz-HYA replied—"In antiquity, when heaven and earth followed their laws, and the four seasons came at the appropriate time; when the people were virtuous and the harvests abundant; when pestilence did not scath, and extraordinary calamitous phenomena did not affright, that was what we call a state of great prosperity. After such a state of things, eminent sages arose, who determined the duties between father and son, between sovereign and subject, and they made use of this as the lever—for moving society. Now as the lever was correctly true, the empire was thoroughly settled. When the good order of the empire was thus established, then the six notes were perfected, the five tones were harmonized, instruments were introduced, and songs, odes and eulogies were composed: these may be called virtuous airs; and it is only virtuous airs that can be called music. Hence it is said in the Book of Odes:—

"Pure and tranquil! how harmonizing was the fame of
Wang-kyi's virtue,—

A virtue which was widely displayed, and which illuminated
the world brilliantly:

With perspicacity to discern, and equity which could rightly
award;

How easy to him were the functions of instructor of the age;
How eminently was he fitted to be the sovereign to reward
and punish;

And to lead to prosperity this great country:
The hearts of the people he could render docile,
And in harmony unite the governing and the governed.

When we come to *Wun-wang*, still more,
His virtue was not regretted, as extinct with him;
Since, of the happiness imparted by the Supreme Being,
There remained still enough for his descendents to the latest
generation.'

Which is to the same effect as what has been stated.

"Now, the airs of which you are fond, O prince, are they not lascivious airs." Prince Wun said—"May I venture to ask

whence come lascivious airs?" *Tsz-hya* replied—"The airs of *Ch'in* lean toward depraved thoughts. The airs of *S'ing* are full of lewd ideas. The airs of *Wéi* are lively, and inflame lustful passions. The airs of *Tsi* excite arrogance and pride. All four kinds tend to drown men in the pleasures of lust, and are an injury to virtue, for which reason they are not used in the sacrifices.

"It is said in the Odes—'Music in which the *súh* and the *yíng* accord, is heard with pleasure by our ancestors.' *Súh* means reverential deference, and *yíng* means harmony. Now, where respect and harmony prevail, what affair may not be accomplished?

"He who governs men should pay great attention to his likings and to his aversions; for so soon as the sovereign gets fond of anything, the magistrates immediately do the same, and so soon as those in high places do anything, the people immediately imitate them. The Ode says—'There is nothing easier than to lead the people into good or evil, by the example set: which is equivalent to what has been said.

"When music had been instituted,—the instruments called the *tau*—or hand-drum; the *kú*—or common drum; the *ky'ang*—or wooden-tapper; the *kyih*—or sonorous lion; the *kyün*—or earthen-egg pipe; and the *chz*—or flute, were constructed. These six sorts of instruments produced sounds in harmony with virtue. The bell, the sonorous stone, the *yü* pipe, and the *sch*—or twenty-five stringed lyre followed, to harmonize with them. Shields, battle-axes, and shafts ornamented with streaming feathers or flowing hair served for the manœuvres. These were the implements made use of at the sacrifices in the ancestral temples of the ancient kings: such also were the implements made use of at those convivial feasts where the host drank in honor of the guests, and the guests returned the compliments of the host. It was these things that served among the magistrates, to distinguish between the more and the less honorable, so that each obtained what was suitable to his rank and merit. These were the things which served to proclaim to after generations the distinctions established between the honorable and the plebeian, and the grades between superiors and inferiors.

"The sound of the bell goes *k'ung*—*k'ung*. This sound reminds the ruler of the standard of the commanding general—which moves the troops. This standard inspires courage, and leads to

valorous deeds. When the sage ruler hears the sound of the bell, then he thinks of his valorous generals. The sound of the jadestone goes *ching—ching*. This clear sound recalls the necessity of clear discrimination and accurate judgment. The equity of character which is the sequence, enables one to confront death. When the sage ruler hears the sound *ching*, then he thinks of his generals who die in defending the frontiers of his kingdom. Silk cords produce a dolorous sound. Grief causes one to be given up to a single idea. Occupied by one idea, the mind is recalled to virtue. When the sage ruler hears the sound of the lute and the lyre, he then thinks of his magistrates whose minds are set entirely upon the proprieties pertaining to their administration. The sounds of bamboo instruments remind one of the overflowing of waters. Overflowing waters remind one of the vast assemblages driven together thereby. When the ruler hears the sound of the bamboo instruments called the *yü* and *süing* pipes, and the *siau* and *hwan* flutes, he immediately thinks of his magistrates who know how to bring men together. The sounds of drums and tambourines are clamorous. By clamorous sounds troops are moved. The movement causes them to advance together. When the ruler hears the sound of the drum or tambourine, he immediately thinks of his leading generals. Thus, when the wise ruler listens to music, he does not confine himself simply to the more or less sonorous nature of the sounds, but he thinks also of their relative affinities. He whose mind is employed thus, is not in danger of becoming drowsy."

CHAPTER IX.

Ancient and Modern Music, continued: Conversation between Ping-meu Kya and Confucius.

Ping-meu Kya being seated by the side of *Confucius*, the latter began to speak of music, saying—"In the musical performance called *Wü*, why is there so much time occupied in preparation,"—after the drum has given the signal to begin? *Ping-meu Kya* replied—"It represents the concern lest the general assent of the leaders and people should not be obtained." "And what," continued *Confucius*, "means the long-continued strain, resembling continued desire, which follows the drum's warning sound, and

precedes the evolutions?" *Ping-meu Kya* replied—"It is the fear lest the feudal barons should not arrive in time to assist"—in the grand undertaking of punishing the tyrant *Cheu*. "And why," again inquired *Confucius*, "is there then such a precipitate movement of hands and feet?" "Because," replied *Ping-meu Kya*, "the time for going into action has arrived." "And why," continued *Confucius*, "in the same piece, when the time to kneel comes, do they kneel upon the right knee, and lift the left?" *Ping-meu Kya* replied—"that is not the way of kneeling proper to the *Wú*." "Why those sounds," said *Confucius*, "which seem as if they were hankering after the *Shíng* dynasty?" *Ping-meu Kya* replied—"Those sounds do not belong to the piece *Wú*." "If those sounds," replied *Confucius* "do not properly belong to the piece *Wú*, whence are they?" "They come," replied *Ping-meu Kya*, "from some director of music who has lost the correct tradition. Were it not so, it would result, then, that *Wú-wang* had barren thoughts"—a conclusion which is inadmissible. "You are right," said *Confucius*, "I have heard several of the great officers of *Cheu* relate the same thing as yourself."

Ping-meu Kya arose, left his place, and respectfully addressing *Confucius* said—"The tardiness which accompanies the prelude, in the performance called *Wú*, thanks to your kindness, I now fully comprehend. But may I venture to inquire of you how it is, that after the first delay there is yet a second delay of longer duration?" *Confucius* replied—"sit down, and I will tell you. Musical performances represent events which have had their accomplishment. In this piece, there is, at one time, a general raising of spears and shields and standing erect like a mountain immovable. This represents the waiting of *Wú-wang* for the feudal lords to arrive. The rapidity with which the performers move their hands and feet, images forth the spirit which actuated *Tai-kung*. The general confusion represents the battle; the general resumption of places, shows how the duke *Cheu* and the duke *Shau* governed the people.

"Now, the musical performance named *Wú* represents first, the starting out toward the north—as *Wú-wang* did when he went to inspect the troops for the expedition against the tyrant of the north, *Cheu*. The second part represents the extinction of the *Shang* dynasty. The third part represents the return toward the south—in imitation of *Wú-wang* after the defeat of the tyrant *Cheu*. The fourth part represents the establishment of

king *Wü*'s rule over those princes of the south who were reluctant to submit to his authority. The fifth part represents the division of the administration between the dukes *Chou* and *Shan*, the former ruling the left hand or east, and the latter the right hand or west. The sixth brings us back to the starting-point—which is to represent the elevation of *Wü-wang* to the imperial throne. The two champions making four attacks, represent the indomitable power of king *Wü*, now spread over the middle-kingdom. The two officers (holding wooden bells) on the flanks of the troops, and urging on the advance, represent the urgency of *Wü-wang*'s undertaking in order to release the suffering people from the oppression of the tyrant. The long standing at the commencement, represents the waiting of *Wü-wang* for the arrival of the feudal barons, to begin the attack on the tyrant.

“Moreover, have you alone not heard the story of the battle on the plains of *Moh*?..... *Wü-wang* having vanquished the dynasty of *Yin*, and having arrived at the capital of *Shang*—in the district of *Méi*—ere he had alighted from his chariot, he had already invested the descendants of *Hwang-ti* with the principality of *Kyi*; he had invested the descendants of the emperor *Yau* with the principality of *Chü*, and had invested with the principality of *Chun* the descendants of the emperor *Shun*. Having descended from his chariot, he invested the descendants of *Yü* of the *Hya* dynasty with the principality of *Kyi*; he sent the descendants of *Yin* to the principality of *Sing*; he invested with a suitable burial-place [or raised a tumulus to] the prince *Pekán*; released *Kyi-tsz*,—or the viscount of *Kyi*,—from his imprisonment [and it is said sent him to *Corea*], allowing him to follow the usages of the *Shang* dynasty, and to resume the throne thereof; he freed the people from oppressive laws, and increased the emoluments of all whom he had employed. *Wü-wang* crossed the Yellow-river and went to the west. The horses used in the campaign he let loose upon the south side of the *Hwa Shan*—or Flowery Mountain—and they were mounted no more. The oxen—used for drawing—were let loose in the uncultivated lands of *Tau-ling*,—or the Peach Forest, and were no more subjected to the yoke. The war-chariots and armor were varnished over with blood, and laid up in the arsenals, and were never used again. The arms used were reversed, enveloped in tiger-skins, and were pronounced laid up. The officers who had high commands were appointed governors over provinces, and then all the empire knew that *Wü-wang* did not wish to go to war any more.

"The army being disbanded, archery was taught in the imperial institute; on the left they drew the bow to the air "*li-sheu*"—or "*fox-head*:" on the right to the sounds of the air "*tseu-yü*"—or the "*virtuous horse*:" as to the shooting of arrows, in which the object is to pierce through the leather target, that practice was discontinued with the cessation of the war. The costume and ceremonial hat for magistrates, were revived, with the use of the ceremonial tablet held before the visitor; and the body-guard laid aside their swords. The ancestral sacrifice was offered by *Wü-wang* in the great hall of the palace, whereby the people understood what filial piety meant. By their visits at the court, the feudal barons learnt the duties of a vassal. By seeing the sovereign himself work in the holy field,—the productions of which were used for sacrifices,—the feudal lords learnt the duty of reverence. These five affairs were the great instructions of the empire.

"At the feast in honor of old men, which was given in the great college, the emperor tucked up his sleeves and cut the meats: he took the sauces and presented them: he took the wine-cup and presented the wine. Covered with his ceremonial hat, by taking part in the general evolutions, he taught the feudal lords the duties which younger brethren owe to their elders. In this manner the great duties pervaded all quarters, and the rites and music circulated everywhere. Tell me now, whether there was not propriety in the long delay at the opening of the musical performance called *Wü*?"

CHAPTER X.

The Renovating Influence of Music: How conservative and reformatory it is.

It is said by the sage that propriety and music may not for a moment be separated from our persons. When we thoroughly investigate music, in order to regulate the heart, then the sentiments of uprightness and goodness come forth with facility. When the sentiments of uprightness and goodness spring forth, then one is pleased. When one is pleased, then there is quiet. Where quietness is, there will be long duration. Where long duration is, there is heaven—and where there is heaven, there the gods

are. It is no more necessary that heaven should speak, in order to obtain our credence, than it is that the gods should be angry, in order to overawe us. So it is, when we investigate music thoroughly, in order to regulate inner man.

When we thoroughly investigate the rites, in order to regulate the outer man, then we acquire gravity and a respectful deportment. Possessing these, they give an imposing air. Should the mind be for a moment without the peace and self-satisfaction which virtue brings, then low and deceitful sentiments enter at once. If the exterior for a moment be wanting in gravity and a respectful deportment, then the feelings which easily enter, at once excite contempt.

Now, music having its origin in the interior emotions, and the rites having their accomplishment in exterior movements, when the sage thoroughly studies the harmony proper for music—with the view of regulating his mind, and in the same manner studies the proprieties belonging to the rites—for the purpose of regulating his exterior, inwardly he is in perfect harmony, and outwardly he conforms to propriety; then the people, by only looking at the appearance of his face, abstain from quarrelling with him; and if the people only take one look at his countenance, no sentiment of disrespect can have birth. So it is, that when the lustre of the sage's virtue shines within him, among the people there is not one who does not imitate and listen to him: and when the proprieties are manifested without, there are none among the people who do not conform to their requirements. Hence comes the saying,—“when the sage ruler thoroughly understands the principles of music and of the rites, whatever errors may arise in the empire, there will be no difficulty in correcting them.”

Music has its source from interior emotions, and the rites have their accomplishment in exterior movements. It follows that the tendency of the rites is, to bring down in his own estimation, the person who observes them, and the use of music is to fill up the mind with sentiments of good will. Yet, while the rites take down self-conceit, they ought not to hinder our advance; for by advance an accomplished character is formed; just as it is, that while it is proper to have the mind filled with the sentiments inspired by music, yet it is by restraint that an accomplished character is formed. If in the rites we bring ourselves down, without advancing, we are reduced to nothing; and if in music

we fill ourselves up, without restraint, we abandon ourselves to dissipation. Therefore it is that, in the rites we advance, and in music we recede. When in the rites we succeed in advancing to the proper point, the result is pleasure; and in music, when we succeed in restraining ourselves within the proper limit, the result is ease. So, advance in the rites, and retreat in music; mean about the same thing—preserving the mean.

Now, it is the nature of music to hold joy within those bounds which keep it in accordance with the sentiments of humanity. Man's joy must be manifested by the sounds of his voice; and rendered visible by the movement or repose of his person. The action and changes of human emotion find their exhaustion either in the sounds of the voice, or the movement or repose of the body. Man must have pleasure, and pleasure must have its manifestation. If it be allowed to manifest itself without order, then it cannot escape running into confusion. It was because the ancient emperors were ashamed of this disorder that they established the *Yá* and the *Tsúng* Odes [such as now form part of the poetical *Elegant Extracts*, said to be compiled by Confucius himself]—in order that joy might be correctly directed. Therein they managed that the voice should have sufficient scope for joy, without allowing it to run into excess and dissipation. In these odes they managed that the composition should furnish matter enough for the discussion of principles, without extinguishing joy. They so managed that there were curved sounds and straight ones; sounds that were full, and lean sounds, abrupt sounds and those that were continued; dividing sounds, and connecting ones, which were quite adequate to move the human mind to good, without causing any irregular emotions to find reception. Such was the method of the ancient emperors when they instituted music.

Therefore, when music was performed in the ancestral temple, the sovereign and magistrates, superiors and inferiors, heard it together, and there was not one among them who was not harmonized into respect. When music was performed in a clan or a neighborhood, the aged and the young heard it together, and there was not one who was not rendered docile thereby. When music was performed within the private family, father and son, elder and younger brother heard it together, and there was not one among them who was not drawn into closer affection. [Alas for the poor women of China! Where were they?] So, in music, the mind endeavors to establish the accord which exists between

the harmony of sounds and their sentiments. The instruments and implements employed in musical performances give the external embellishment. All the parts unite in forming a complete composition, and this complete composition unites in harmony the father and son, the sovereign and the minister, and conciliates the affection of all the people. Such are the results of the method of the ancient kings in the institution of music.

Thus, in listening to the singing of the *Yü* and *Tsung* odes (which rectify our obliquities and praise our virtues) the thoughts acquire breadth and expansion. In grasping and using the implements used in the evolutions, in exercising the inclinations and elevations of the head, the crouchings and the extensions of the body, the exterior acquires gravity. In keeping one's self in the proper rank and place, in giving due attention to the strategic rules and evolutions, the different ranks of performers are kept in line, and the marches and counter-marches preserve the requisite precision. Wherefore it may be said of music, that it is like the instructing ordinance of heaven and earth, or the harmonizing binding-cord of the Mean—from whose restraint human passions cannot free themselves.

Now, music may be considered as the outward adornment given by the ancient kings to their joy—just as troops and their banners and arms were the outward manifestation of their anger. So, whether in their expression of joy or anger, the ancient kings had their rule. Thus, in joy the empire was in accord with their sentiments; and in anger, then the oppressor and the disorderly alike were overawed. Hence it was, that under the system of government adopted by these ancient kings, the rites and music were in so flourishing a condition.

CHAPTER XI.

Tsz-kung's conversation with the Music-master Yih: The use of Song, and its effects.

Tsz-kung, at an interview with the music-master *Yih*, put to him this question,—“I have heard it said that for every person there is a song which suits his character and disposition. Now, as to myself, can you tell me which would be suitable to me?” The music-master replied—“I am but an unskilful artist, how could I presume to determine your question as to what would be

befitting? But if you will rehearse those you have heard, you, my master, will be able to lay hold yourself on a reply to your inquiry. I have heard that, to men with varied ideas but calm temperament, and to men who are meek but of upright character, the Odes of Praise [*Tsung*] would be suitable. To men with broad and liberal ideas, but calm in temperament; and to men of thorough penetration, but worthy of all confidence, the Odes of the *Tü Yü* suit. To men who are respectful and economical, but who love the rites, the *Sian Yü* suits. To men who are true and upright, but calm and uncorrupted, yet condescending, the *Kwóh-fúng* suits. To men of unbending rectitude, yet compassionately tender, the *Sháng* suits. To men who are mild, and yet know how to decide, the *Tsi* suits. The nature of the odes requires that one should first rectify his own person, and then select the ode calculated to manifest the virtue one has acquired. When one sets the virtue of his character in action, then heaven and earth respond; the four seasons harmonize; the celestial bodies follow their laws, and all beings receive nourishment according to their respective exigencies.

"Now the *Sháng* has been bequeathed to us by the Five Emperors; but it is because the people of the *Sháng* dynasty were well acquainted with it, that it has been called *Sháng*. The *Tsi* was bequeathed to us by the three dynasties—of *Hyá*, *Sháng* and *Chen*, but it is because the people of *Tsi* were well acquainted with it that it has been called *Tsi*. When one thoroughly comprehends the meaning of the airs of the *Sháng*, he is fitted to decide all questions presented: and when one understands the sense of the airs of the *Tsi*, he willingly yields to others, even at the sacrifice of his own personal interests. To decide every affair which presents itself may be called bravery; but to yield willingly to others what is just, at the sacrifice of one's own personal interests—that is equity! Were bravery and justice not preserved in song, pray tell me how they could be rendered durable?"

In song, the high notes may be likened to one's raising the hands as high as possible. The low notes may be likened to one's letting something fall. The curved notes may be likened to repressed feeling. Notes when abruptly arrested may be likened to the breaking of dry wood. Angular notes may be compared to the square. Rounded notes may be likened to a crook. Notes that succeed each other uninterruptedly, may be compared to a string of pearls. Wherefore it may be said that song is

nothing but words—yet words prolonged. When one is delighted he feels the necessity of expressing his joy by words; but undorned words being insufficient, they are prolonged; prolonged words not sufficing—they are modulated and melodized to express the emotions that produce them; modulation and melody being found insufficient, the hands and feet are unwittingly set in motion, to give vent to the emotions of the mind.



ARTICLE IV.

SOME REMARKS ON RECENT ELEVATIONS IN
CHINA AND JAPAN.*

By ALBERT S. BICKMORE, Esq.

IN the old and accurate description of China, compiled by Du Halde, about the year 1725, from the full diaries and journals kept by the Jesuits, who between 1708 and 1717 travelled over and mapped out all that vast empire, I find these note-worthy and valuable remarks on the changes in the physical geography of China, since the date of her earliest history.

“In the abridgment of Chorography, entitled *Quang yu ki*, we find the City of *Chau tsyen* [the capital of Corea in 1694], where *Ki pe* [the king of Corea at that time] resided, is in the Territory of *Yong ping fu*, a City of the first Order in the Province of *Pe che li*. Now supposing this to be true, one may reasonably conclude that the antient *Chau tsyen* and *Korea* were contiguous, and not separated by a Gulph till many Ages after. For it is not to be imagined that a Prince would fix his Residence out of his own Dominions, especially, if divided from them by a wide Sea. This Conjecture will appear the more probable, if we carry our Speculations a little higher [i. e. to a more ancient period]. When *Yu* (whose Memory is justly honoured by the *Chinese* with the Title of *Great*) undertook to drain the Waters, which under the Reigns of *Shun* and *Yau* had overflowed the flat Country, he cut a Passage for the River *Whang ho* thro’ a Mountain on the Southern Boundaries of *Shan si* and *Shen si*, which Provinces that River separates, and makes a Cataract here not inferior to those of the *Nile*. Thence he conducted it thro’ the Province of *Hon nan*, and following its Channel along the Province of *Pe che li*, he drained the Lake *Tu lu* [i. e. Lake Peh-lu] into which the *Whang ho* formerly emptied itself. This Lake overflowed all that Country which now includes the Districts of *Shun te fu* (a City of the first Order,) *Chau chew* and *Shing chew* in the same Province. At last to break its Rapidity, he divided it into nine Channels, which

* Read before the Society on 5th November, 1867.

some imagine were again united before it disembogued itself into the sea. But whether they were joined, or if it was only the main Channel that ran into the Sea at the Foot of the Mountain *Kye she shan*, which then made a Promontory, this is certain, that since *Yu* began that great Work about 3921 Years ago, this River has stray'd far from its antient Course; for instead of discharging itself into the Sea, as it did formerly in Lat. 40°, it now falls into the River *Whay ho*, a little above *Whay ngan*, a City of the first Rank in the Province *Kyang ngan* [i.e. Kiangsu] about Lat. 34°. It is likewise observable, that the Mountain *Kye she shan*, which was formerly united to the Territory of *Tong ping fu* is now 500 Li [about one hundred and sixty miles] distant in the Sea from this City [and is probably one of the islands near the promontory north of the Maintan group]. So that the Sea gaining on the Land by Degrees, hath at last overflowed all this Tract of Ground. It is indeed true, that the *Chinese* History makes no mention of this extraordinary Change of the Course of the *Whang ho*, nor of this Overflowing of the Sea. But when Alterations on the Surface of the Globe are brought about insensibly, and without alarming Nature, they easily escape the Observation of History, the Difference that happens during the Life of one Man being not at all perceptible.”*

In October 1866, after a long journey through the central and southern parts of China, I took passage from Shanghai for Tientsin, through the kindness of Messrs. Trautmann & Co. on their good steamer, the *Nanzing*. From Tientsin I proceeded to Peking, and thence to the mountains on the north, and along their flanks to the Nankow Pass, and on to the coal mines, a day's journey southward. And in entire accordance with Du Halde's statements and speculations, everywhere over this steppe-like plain of Pechili, evidences appeared of its recent elevation above the sea, and, farther, that its true eastern border is not the present sea shore, but that this plain actually extends out *under* the Gulf of Pechili, and *under* the Yellow sea, on the north of Shantung, to Corea, and on the south, even to the Japanese Islands, the Lew Chews, and Formosa! For the real eastern border of the continent of Asia, as is well known, is not the present coast line, but including Sumatra, Java, Borneo, and the Philipines, it extends along the eastern shores of Formosa, the Lew Chew group, the Japanese Islands, and the Kuriles to Kamtschatka. In other words the

* A description of the empire of China. 2 vols. London, 1741. vol. 2. p. 382.

eastern margin of this great continent has suffered a slight depression and is now partly covered by the waters of the Pacific Ocean.

Between the line indicated above and the present coast of China, the waters are all comparatively shallow, but outside this line the sounding lead runs down to great depths, and at once shows us we have come to the true edge of the great Pacific basin.

If the north of China was to be raised but one hundred and twenty feet the whole Gulf of Pechili would disappear, and if it was elevated as much more, in place of the Yellow sea, we should have a dry plain from Peking to Corea. And such a change is *actually* taking place. At Chefoo, on the northern shore of the promontory of Shantung, there is a long sand spit extending out from the mainland to a high headland and forming the western shore of the harbor. On this spit are seen two old sea beaches, as perfect as the present one. The highest is but a few feet above high water level, yet it shows what kind of a change the surrounding area has recently undergone, and this assumption is further strengthened by the testimony of the Chinese that the harbor is "slowly filling up." It is seldom possible to obtain data that will give us the *rate* of such changes, and the following statements kindly furnished me by the Rev. Mr. Mateer of Tung-chau are therefore the more valuable.

"I have learned with some degree of probability, that in the Ming Dynasty—some 250 years ago—the water from the ocean came up the bed of what is now a small creek, past the city, and extending as much as three li (one mile) from the present beach.

"I also learned that at that time the water in the basin of the water city was at least fifteen Chinese feet deep, where it now is not three feet deep. This difference of twelve Chinese feet (equal to fourteen and one-tenth English feet) is the *least* that will account for the water running up to where it is said to have done. At a later date the water came up outside the water city to the bridge, near a *li* (one-third of a mile) from the present beach. The decline has been so gradual that there is now no way of telling exactly when the junks quit coming. It is said there was originally no dry land in the water city save the very least close to the wall.

"It was built by a man named Chi, as a depot for the government junks, and was not intended to include any place to build upon, but to be a safe depot where pirates could not come."

This elevation of at least fourteen and one-tenth feet in two hundred and fifty years gives us a mean rate of nearly *six* feet in

a century, but assuming that this elevating power acts uniformly, to ascertain the rapid rate of the changes in the bed of the Gulf of Pechili, we must add to this the quantity of sediment brought down by the Yellow River, the Peiho, and the minor rivers.

About Peking the plain is composed of stratified clays that form a fine light crust from two to five inches deep along all the travelled roads, in dry weather. In many places I noticed quantities of long claystones branching like corals, for which indeed they have sometimes been mistaken. But instead of being of marine origin, they have been formed by water flowing down along grass roots, which in this way receive a series of concentric layers from the surrounding clay. And as the water naturally follows the branches of these roots the claystones necessarily take a branching form. Frequently where the strata have not been disturbed, the roots can still be seen within these concretions.

In the Nankow Pass and piled up for some distance from the place where it opens out to the plain, appeared considerable quantities of transported boulders. These were probably borne near to the places they now occupy by an old glacier that once filled this pass and brought them down from the neighbouring mountains, or from the borders of the high plateau of Mongolia, on which this river of ice probably took its rise. But a short distance from the mouth of the pass in every direction over the plain, these boulders quite disappear.

Many may have been gathered by the farmers for the walls of their houses, but as few are to be seen in the clay banks, the question occurs whether the materials that fill the Peking basin have not been so completely sorted and resorted by the action of the sea that the larger boulders are now mostly at some depth below the surface. The next day as we followed the flanks of the mountains, we came to a remarkable depression in the plain, evidently the bed of a lake that had been recently drained off, not across the plain, but through some rent in the mountains on the west, to the present channel of the 'Yangho,' and through it to the sea. Farther down the Yangho a small stream comes in on the south-west from the anthracite mine at Mun-to-kow. This minor valley is bordered with a well-defined terrace, some forty or fifty feet in height.

Besides these evidences of the former presence of the sea, several shells of living species were given me from a clay bank not far from Peking.

Though these great changes have taken place so slowly, as mostly to have escaped the notice of man, it has been far otherwise with the Yellow River, whose irregular wanderings and destructive floods have well gained for it the title of "China's Sorrow."

All rivers after wearing out their channels to a certain depth, have a tendency to deposit in their own beds a part of the sand and mud they are bearing along, and this tendency is greatly increased by confining them with dams, and preventing them from overflowing, when swollen by rains or melting snows, and therefore more heavily laden with such materials. The Po, in this way, has raised its bed until the surface of its waters is above the houses of the peasants, and it has already once deserted its old channel and formed a new one, and this is, in short, the whole history of the Yellow River. When it had filled up its old channel to the south of Shantung, and succeeded in making a breach in its dams, it followed nearly its previous course north of Shantung to the Gulf of Pechili.

The whole plain through which it flows being of alluvial origin and completely intersected by canals or small streams, its waters would readily find a lower channel, which their momentum in coming down from the higher level of their old bed would enable them to quickly enlarge. The elevation of the land along the sea shore, at the rate of six feet in a century, would have a tendency to keep the river in its old channel if there was an equal or greater elevation along the upper part of its course, but if the interior has subsided or remained at rest while the seaboard has been rising, the strength of the current must have been diminished, a greater quantity of sediment deposited in its bed, and therefore the danger increased of its bursting its artificial banks. Perhaps no data have yet been obtained to show whether or not the interior of this continent has remained at rest during this time or whether it has been raised or depressed, but it should be noted that where it joins the continent of Europe, its latest movement has been one of elevation and that the Aral sea and the salt lakes that lie north and east of it are only remnants of an old arm of the Arctic Ocean that once stretched down along the eastern flanks of the Ural mountains. The last change in the course of the Yellow River occurred when a strong detachment of the Taipings were approaching and threatening Peking, and is supposed to have been caused by a breach, made either by them, or by the Imperialists to arrest their progress.

All accounts agree that this change is complete, and that its old bed is now dry; and this is only another way of stating as a fact what has just been assumed, namely, that the river continued in its old channel until its bed had become as high or higher than the surrounding country.

Dr. Martin of Peking informs me it now leaves its old channel a short distance below Ifung, and passing northerly near Tsauchau and Poh to Fan (see Dr. Williams' map), it flows in a north easterly direction to Tungping, and thence to Tsinan for the capital of Shantung, and down the channel of the Tatsing river to the Gulf of Pechili. This course is just about at a right angle with its old one to Hwaingan, and the distance from its present mouth to where it emptied before into the Yellow Sea is over 380 miles in a straight line and nearly twice that along the shore. Perhaps no other river, within historic time, has wandered so frequently and so far away from its old channels, and also, perhaps no other river flows out into a plain of such wide extent at right angles to its course and at the same time of such a perfect and continuous level. From Hangchau Bay on the south, to where the Great Wall comes down to the shores of the Gulf of Pechili on the north, there is one unbroken level for nearly six hundred miles in a straight line. The Imperial or Grand Canal indicates how remarkably low and even the surface of this plain must be. No other country can boast of such an artificial water communication, but what other country has such natural facilities for making one of such length, and, like this, at right angles with its two greatest rivers?

While the Mississippi, the Ganges, and the Nile flow out by many channels through their low deltas, to the ocean; the Yellow River confines itself to one, but a part of its waters may find an exit to the south through the Grand Canal.

That the region about the mouths of the Yangtse has also been lately raised, though it may now be in a state of rest, is shown by the shell bank near Hangchau, described by Dr. Lamprey in his paper on the geology of the Great Plain. The mouths of the Yangtse themselves have also changed, and Tsungming Island (see *China Pilot*) which now has a population of half a million, did not exist in the fourteenth century.

The Tungting and Poyang lakes, which act as reservoirs for this river, receiving a part of its surplus waters during the floods, and pouring it out again when they subside, are now slowly

filling up, mostly with the sediment brought into them by their own streams from the south. It has been noticed that near each of these lakes high mountains appear. This fact probably indicates the origin of their basins, for where the strata have so greatly folded that the crest of the wave is unusually high, the depression of the wave must be correspondingly low.

The basin of the Tungting lake is merely the lowest part in the low area of the province of Hunan. Its waters are very shallow, and during the floods spread out over the low shore on the south. When I reached Siangyin on my way down the Siang, I found we had already reached the margin of the lake, though according to the map it ought to have been dry land for twenty-five miles further.

The Poyang lake, in like manner, is merely the lowest part of the low lands in the province of Kiang-si. The basins of the lakes in the Great Plain may be places of a slight local subsidence, but are more probably small areas not yet filled up with the alluvial deposit of which the whole plain is composed, and which has been brought down from the mountains, mostly by the Yellow River and the Yangtse.

At Foochow and about the mouth of the Min I believe we come to an area that has for some time been slowly subsiding. While all the other rivers in China flow out to the ocean through low deltas, that they have formed themselves, the Min at once empties itself into the sea. No delta is seen, yet it has one, as much as the Peiho, the Yellow River, the Yangtse, the Tsientang by Hangchau and the Sikiang at Canton. Its delta consists of the shallow and dangerous banks about its mouth, and if the deltas of the other rivers were to subside as fast or faster than they are built up by deposits of sediment on their surfaces, each would present a phenomenon strictly analogous to that of the Min.

Noticing this indication of a recent change when I was visiting Foochow, I made inquiries, and Mr. Dunn of Hedge & Co., kindly gave the following corroborative data. In digging a well in their compound, "at a depth of from twenty-five to thirty feet below the surface of the ground, there were found two boards each about four feet long and one wide, nailed at the ends to a post. At the same depth was found a quantity of broken crockery of the same kind as that now used by the lower classes of Chinese; and a number of pieces of half decayed wood. The earth in which these things were found was a rather loose mixture of mud and

sand, bearing a close resemblance to what is now seen along the river banks at low water.

"The impression upon my mind at the time was, that we had struck the remains of a Chinese house, and the workmen were of this opinion. The tide here has a rise of about twelve feet at high springs, which would place the post about *twelve feet below the present low water level*.

"According to the Chinese, what is now the navigable branch of the river, i.e. between the city and the foreign settlement—was some 900 years ago, too shallow for junks and large boats. The south branch was then in general use. The long bridge at the head of the island, and the remains of dikes and flood gates in that vicinity add probability to this statement."

In the plain about Foochow, the river Min, as indicated above, frequently changes its bed by washing away one bank and building up the opposite one. At the foreign settlement lines of stakes are placed in edge of the stream to catch this changing sand and gain land on that side. At first it might appear that this post with its boards had simply sank on one side of the river bed, and been covered by sand and mud from the opposite bank, but the fact that it appeared to be part of a house and that it was found with fragments of earthenware shows it had probably not floated to the place where it was found.

The simple fact that twenty-five feet of sand and mud had accumulated over these human relics, speaks in itself of their high antiquity.

In the south of China, along the east river, Dr. Legge informs me he has seen a large bank of shells, which he believes will all prove of living species.

Passing from the continent to Formosa, Mr. Swinhoe informs me that Castel Zelandia, a fort built by the Dutch in 1634, on what was then an island, is now found some distance back from the sea, in the vicinity of the city of Taiwanfu; and also that at Takao recent corals and recent shells are found at a height of 1111 feet above the level of the sea.

When I was in the north of China I enjoyed the privilege of going in the U.S. Ship *Wachusett* over to the mouth of the Tatung river on the western coast of Corea. This river was found to debouch into a large bay, and all along its northern shore there is a continuous and gradually rising plain to the feet of a range of quite high mountains that rise up abruptly from the low land.

A second indication that that area has been elevated at a very recent period is seen in the streams from the little valleys among the mountains having as yet only worn out for themselves narrow and shallow channels. The height of this elevation I estimated at from three hundred to five hundred feet.

Passing over to Nipon we find on the western side of the bay of Yedo, as we approach Yokohama, a plateau of some two hundred feet high, its top as level as if made by art. A short journey back to Kanasawa, across to the bay of Kamakura and thence up the Tocaïdo to Kanagawa, showed me that this whole area was also of a recent marine origin. The highest place we passed over that had lately been subjected to the action of the sea, I judged to be from five hundred to six hundred feet above the ocean level; but terraces of twice that height will no doubt be found among the mountains. All the hills in this region have been gradually formed by the streams washing out small valleys. These are constantly widening and occasionally two have nearly met, and in such places only long sharp ridges are left of the original plateau.

In the bay of Kamakura lies the island of Enosima, connected to the mainland by a sand spit about half a mile long and from two to five feet above high water level. This seems to have appeared since the year 1691, for Kämpfer who passed near by in that year on his way to Yedo, thus minutely describes an island, which in all other respects agrees with Enosima, excepting alone the name which he seems to have given it from that of the bay and a neighbouring city.

"Off the shore—in the outer bay of Yedo—was seen the island Kamokura, with high rugged shores, but of which the surface was flat and wooded. It was not above four miles circumference, and was used like some other islands as a place of confinement for disgraced noblemen. There being *no landing-place*, the boats that bring prisoners or provisions must be hauled up and let down by a crane."

North of Nipon, on Yesso, terraces line the northern shores of Tsugar Strait and Volcano Bay, and what has been described in Corea, is repeated there, but on a far grander scale. The greatest height to which I have been able to trace the recent action of the sea is 1,180 feet above the level of the ocean, four miles north of Hakodadi, and most or all of this considerable height, I believe has been caused by a general and not a local elevation.

ARTICLE V.

NOTICES OF LOK PING CHEUNG 駱秉章 LATE GOVERNOR
GENERAL OF SZE CHUEN 四川.*

BY REV. C. F. PRESTON.

THE accompanying Memorial and Imperial Rescript are of such interest, that it is proper to translate them, with the addition of a few particulars, gathered chiefly from conversations with a Chinese friend, who is well acquainted with the circumstances. It may be premised, that the facts are well known by the people of Canton; and as is quite natural, no little satisfaction is expressed by them, in having had such a worthy representative in the government.

The late Viceroy is a native of the Flower District, 花縣 which lies to the north of Canton about 30 miles, and the family are now residing at Fuhshan 佛山 the large market town, about 12 miles to the east of this city. When he was young he was a child of poverty, and when about 17 years of age was employed as a cook in the family of a gentleman by the name of Cheung Kam 張金 who resided on the island of Honan 河南 opposite the provincial city, whose sons were taught by a tutor at home. While employed in his menial occupation the cook found time to carry on his studies. He would come to the door of the apartment where the classics were explained, and listen to the instructions given. One day an essay was brought for correction, which the teacher, a "Siu t'sai" 秀才, was confident was not composed by the boy who presented it. Upon being charged with imposition, the young culprit confessed that the paper was prepared by the cook. The teacher was surprised, but satisfied himself of the facts of the case by giving the master of the kitchen a trial, to write upon a theme in his presence, which was done in a short time, and without the necessity of making corrections. The matter was reported to the gentleman

* Read before the Society on 13th November, 1868.

in whose family it happened; and he willingly acceded to the request of the teacher, to give the lad the advantages of a good education. He released him from his servile engagement, gave him a place with his own sons, and subsequently presented him a daughter in marriage. He passed successively the several examinations, until he became a member of the Han Lin Academy, 翰林院 from which according to the following translations, he was recommended for promotion. The immediate occasion of this recommendation is said to have been the discovery of his stern honesty and strict fidelity, which have been distinguishing traits of his character, during the whole of his official career, and are now the formation of his fame, and the expressed reasons for the high honours which have been accorded to him. It is said that in one of the missions which was entrusted to him it had been customary to receive presents, or what were in fact bribes, to the amount of five or six thousand taels, a portion of which it was usual upon the return to the Capital, to pay over to one of the Members of the Cabinet. In the present instance the payment not being made, an investigation was instituted which resulted in the happy discovery that notwithstanding the poverty of the Commissioner, which was well known, he was proof against the many temptations to official corruption which he encountered, and that he had refused all the presents of the kind referred to, which rare instance of honesty and integrity, was destined to meet an appropriate reward. At the time in question he was remarkable for his simple manners, and want of ostentation. When entitled by his rank to be addressed as "tajen" 大人 great man, he made visits of ceremony, going on foot, carrying his own cards, and being without attendants. A custom most singular, if not almost improper according to the popular code in vogue in China.

It has been remarked repeatedly, that in this respect, as well as in his ideas of what is honest, he was very like a foreigner. Frugality and fidelity are by no means openly ignored as matters of importance in Chinese official life. There is no lack either of profession, of which there is abundance, but the pure article is sufficiently rare to excite particular attention.

Those who have a reputation of this character are always selected as Imperial Commissioners when missions are instituted to inquire into cases of alleged mismanagement, and crimes of high officials, and it is not uncommon to see the character

affected to an extravagant degree, in order to give the greater emphasis to the severity of the examination, an instance of which occurred not long ago, in which it was reported, and believed by the people outside, that the officer of the kind in question, of a very high rank, was content with one servant, and one course at his meals!

The accompanying translations mention that the late Viceroy was, at the time of death so far as his family was concerned, almost alone, the popular reason assigned for this, is want of sympathy on the part of his sons, in the strict code of honesty and integrity adopted by their parent, a fact which resulted in the lamentable separation. It is well known that relatives of officials often take advantage of their position to accomplish private ends, generally without the connivance or knowledge of the official themselves, for the penalties of such offences are very severe. Whatever may be the facts in the present instance, it is evident that such improprieties were contemplated in the formation of the code of Chinese law, which specially provides with reference to the subject under contemplation, that all the principal civil appointments shall be away from the native province, and there are regulations in respect to what relatives are not permitted to dwell, or hold office, within the same local jurisdiction, and perhaps on the same account the term of office is made very short, and matrimonial alliances are in certain cases not allowed, as utterly improper.

The subject of this notice was a great favourite of the people. The distinguishing traits of his character are what would render him such, and his holding office for ten successive years in Hunan 湖南, when the term is three years, is doubtless to be ascribed to this fact, as well as the comparative freedom from the spirit of rebellion during the time of the Nanking 南京 insurgents in the province of Sze Chuen 四川. It is certainly remarkable that this large outlying province has remained to such a little degree affected by the almost universal anarchy which has ruled so much of the empire in late years; doubtless it has been greatly owing to the personal influence of the Viceroy. One of the so called Kings from Nanking who attempted to gain a foothold there, was captured and executed, as referred to in the translations for which at the time much credit was awarded in the "Peking Gazette." Another evidence that he was beloved by the people is told with unfeigned pride by the people of Canton as seldom or

never having occurred before, that for seven days after his death, people of all classes, even the poorest in the province where he held office, put on mourning, and refrained from all festivity and expressions of mirth, as though they had been bereaved of a parent, and this spontaneous homage of the people is felt to be a more precious tribute to his memory than even the Imperial favours.

The surgical operation referred to was performed by Kwan A I'o, a Chinese long connected with the hospital of the "Medical Missionary Society in China," at Canton, for which a long journey and protracted absence was required, but it was in a measure successful, and it was suitably rewarded.

It is an interesting fact that the late Governor of Canton, "Tseung Yik Lai" 蔣益澧, of whose energy, fidelity and honesty so much has of late been written in connection with the many reforms inaugurated at Canton by him, was a decided pet of the subject of this notice. The people insist that they were kindred spirits, and therefore a special and mutual attachment was the result. As was the case with many of the most successful military leaders of the past few years, this official was recommended by the late Viceroy. It is reported as a matter of true history, that after a certain reverse, the life of this young officer was demanded by Chinese law and custom, to atone for defeat, and that he was only saved by the energetic protest and security of his venerable friend, and it is moreover the popular belief that the document referred to in the translations, as left to be forwarded to the Emperor, contained an expression of confidence and earnest recommendation of the late Governor, now partially degraded.

The following is the original, with a translation, of a pair of scrolls which were sent according to Chinese custom to the bereaved family after the news of the death of Lok Ping Cheung 駱秉章 by his protégé, Tseung Yik Lai 蔣益澧.

1. 文瀾國忠愛常存化布十六年祐我湘江同再造.
2. 武鄉侯經論未竟名揚十八省如公嶺表又何人.

1. In civil life the patriotism and charity of "Lo Kwok" are preserved, his renewing influence extended over a period of sixteen years. He protected me by the "Seung" river, and I was restored to life again.

2. In military life, twisting the threads of the web like "Heung Han" is not over, his fame spread through the eighteen provinces. Who is to be compared to H. E. beyond the mountain range? (Southern China).

The Chinese gentleman referred to as patron, survived to a good old age to see the fame of his son-in-law, in his high elevation, nor was he forgotten. So long as he lived a sum of money was every year sent for his support and it was needed, since in China as in other countries it is not uncommon to see changes from wealth to poverty, and especially of late years the waves of elevation and depression have passed quickly through the social life of this empire.

In regard to the posthumous honours, conferred upon the subject of these notices, it was at first a matter of conjecture, and efforts were made at the capital by the friends of the family to obtain substantial acknowledgment of his services, and as the merits of the case were well known, it was confidently expected that in accordance with a wise policy they would not be suffered to go unrewarded. Whether these expectations were fully met, or to what they would amount to by the standard of western ideas, it would be difficult to say. It is evident that in him the present dynasty has lost an able and faithful servant. The honours accorded to him are exceedingly prized and seldom obtained by his countrymen by whom they are earnestly sought. Hereditary rank in China does not bring so many substantial benefits as in the countries of the west, and as there is no law of primogeniture, it is seldom of long continuance, and unworthy descendants are deprived of the position. Having a place in the "Chapel of the Worthies" at Peking, might be compared with the permission of burial in Westminster Abbey, or having a monument erected at government expense.

It would be interesting to know what were the feelings of the late Viceroy in regard to the relations of China with western countries, but he was not brought into any connection with foreigners during his official life, and he was absorbed in attention to matters at home.

From what is known of him and the name he has acquired for himself, he may be regarded as a bright example of official integrity and honesty, and he was a tower of strength in the time of his country's need, found to be such by those who sought to overturn the present dynasty. In both civil and military affairs his executive ability was manifest.

Memorial of the Tartar General Shung Shih 崇實, in relation to the death of Lok Ping Cheung.

Your slave Shung Shih 崇實 kneeling makes a Memorial concerning the relinquishment of office by H. E. the Governor General, and in accordance with custom the memorial is sent by express, looking up and praying for the Imperial attention.

It appears that "Lok Ping Cheung," 駱秉章 Assistant Member of the Cabinet, and Governor General of "Sze Chuen" was more than seventy years of age. During the autumn of T'ung Chi 同治 3rd year, (1864,) in the first instance and subsequently by Imperial favour, he was granted a vacation on account of disease in his eyes. In the 9th month of the 4th year a memorial was sent praying to be permitted to retire, when the Imperial Will caused Your slave to perform in addition the duties of that office, in order to rest and healing, following which a surgical operation was performed with the needle. In the 3rd month of the present year, although his vital energy had not recovered its usual force, he was for a short time able to examine public documents, and he felt that having received distinguished favours from three emperors he did not dare even to rest for a little, or cease attending to the business connected with the office. Just at this time the "Nin" 捻 rebels burst into "Shien" 陝西 and "Nan" 雲南 (Shensi and Yunnan,) plotting with reference to "Sze Chuen" 四川, so that in increasing the army and planning defense he had not a day of rest, and did not fail to exert himself to the limit of his strength. From the commencement of the autumn his eyes at times were clear, and at times blind, his steps began to be slow and heavy, and in walking it was necessary to have assistance. Still he applied himself with energy to the transaction of public business, until the 9th month, when he took a cold which did not yield to remedies.

Your slave was then engaged with the military examinations, but from time to time went in company with the Commissioners, Taotais, &c., to visit him, and repeatedly exhorted him to desist from his labours, but H. E. the Viceroy was all the time employed in the public committee, and bowed himself to sustain the onerous duties of his office, in performing which the patriotism and sincerity of H. E. were manifest in his words and countenance. During the first part of the present month his maladies were aggravated by a difficulty in breathing. Not being able to

sleep at night his vital energy was gradually weakened, and the daily routine of business was more and more deputed for management to the Treasurer, Kong Sze Tsün 江司濬, until he requested a vacation of two months for healing, which during the 12th month was forwarded in a mutual memorial by express. Just then Your slave was engaged in the military examinations, but when they were concluded a visit was immediately made, when it was perceived that his disease was very serious. Already a memorial has been sent reporting in the first instance and subsequently, the conclusion of the military examinations, and a postscript was affixed in a special message making mention of this, but most unexpectedly on the 17th instant, the disease greatly increased in violence, and Your slave, in company with the Commissioners and Taotais of the province, went repeatedly to visit and inquire. Whenever he received us he only spake of the spirit of rebellion not yet quelled, of the plotting around the borders, of the exigencies to be provided for on all sides, and of the plans of defense to be devised. He was aware that recovery from his illness could hardly be expected. He had prepared beforehand a document which was committed to Your slave to forward in his behalf, and he took the seals of his office and delivered them to Your slave to manage in addition to those already incumbent upon me, in order to avoid the danger of delay, and at about 9 P.M. of the same day H. E. passed away.

In a review it is found that Lok Ping Cheung was recommended for promotion from the Han Lin Academy 翰林院, to Hing Tit 卿秩. During the reign of Tao Kwong 道光, in the first instance and subsequently, he received the Imperial appointment to proceed to Shantung 山東, Hunan 湖南, and other provinces, to examine and transact business. Subsequently after being treasurer in Yunnan 雲南, he was promoted to fill the office of Governor of Hunan 湖南, which he held for ten years, training the army and instructing the scholars, distinguishing and promoting those of ability. The several southwestern provinces depended upon him to suppress the great rebellion.

During the 10th year of Hien Fung 咸豐, he received the Imperial commands to take charge of the military affairs of Sze Chuen, after which he received the selection to be Governor General of Sze Chuen, since entering upon which office he has suppressed the several rebellions from T'in 滇 and Ut 粵,

(Yunnan, Kwangtung and Kwangsi). Again he passed beyond the borders of his jurisdiction to gain victories in Kai Chow 階州, utterly sweeping away the rebellious hordes of Ki'en 黔, (Kwai Chow).

In succession he received by Imperial favour the titles, "Protector of the Heir Apparent" 太子太保, "Rewarded to wear the double eyed peacock's feather" 賞戴雙眼花翎, "Rewarded with 1st class hereditary rank, Hing Ku To Wai" 輕車都尉. During the 6th month of the present year he received the Imperial will, to become "Assistant Member of the Cabinet" 協辦大學士. The length of time he was in Chuk, 蜀 (Sze Chuen,) was seven years. His august fame was far spread, the whole province was at rest on account of him, and his public patriotism was early manifested. He was frugal, upright, and exercised self control, all the civil officers and people of the whole province, and the military leaders and soldiers of the several camps, all without exception, stood in awe of his great virtue. Moreover his illness was brought on by his multiplied labours continued until he was unable to rise. Even at the hour of death (lit. changing the mat,) it was only with him a subject of regret that he was unable to requite the Imperial favours by completely destroying the rebellion in the adjoining regions, and there was not a word in regard to himself. Further, there was not a single near relative in his office. His eldest son, Tin Po 天保, a "Yam Shang" 蔭生, of the 2nd class, his second son Tin I 天貽, a "Yam Shang" of the 1st class, his grandsons Man Seung, 懋湘 Man Kau 懋勤, Man Yan 懋仁 and Man Fan 懋勳, counting sons and grandsons, in all six persons, are all at their home in Kwangtung 廣東. Only a grand-nephew, Shin Ts'un 肇銓, one person, was with him in his office. At present Your slave in connection with the Commissioners, Taotais &c., as is a matter of duty will attend to the management of the last offices to the deceased, but the affairs of the office of Governor General are various and of great importance, and there is urgent necessity to guard the borders, it is mutually proper to request that by the Imperial will a high official be soon selected to come to Sze Chuen to take the office and perform its important duties. Your slave, albeit in the meantime performing the duties in addition to his own, will do so to the best of his poor abilities, guarding the several public roads, watching over the officers and

comforting the people, making provision for the revenue, and coming to the rescue of the neighbouring provinces, in all these things acting in sincerity and good faith, not daring in the least to be inattentive or neglectful.

Besides taking the date of receiving the seals, and reporting the same in a respectful memorial to the throne, it is proper to prepare a respectful memorial, in regard to the matters connected with the relinquishment of office by H. E. the Viceroy, by reason of sickness, with the date, and to forward the same by express; and still further, to enclose the document bequeathed by Lok Ping Cheung, all of which are handed up for the Imperial glance, kneeling, praying the Empress and Emperor to grant the sacred glance upon this careful memorial for the Imperial Will.

It is recorded.

Imperial Rescript. The Assistant Member of the Cabinet, and Governor General of Sze Chuen 四川 was patriotic, sincere, faithful, upright, firm in government, and diligent in wisdom. He was recommended for promotion from the Han Lin Academy 翰林院 to the 3rd rank "Hing" 卿, on account of frugal principles and self control. His merit was discovered by the late Emperor Tao Kwong 道光, by whom first and subsequently he was ordered to proceed to the provinces of Shantung 山東, Hunan 河南, &c., to transact business, from which he was successively selected to act as judge, and appointed to the position of a high official. He was in Hunan 湖南 for ten years, training its soldiers and instructing its scholars, discovering and promoting those who had ability. The great rebellion of the southeast was suppressed by his aid. Again he was indebted to the late Emperor Hien Fung, for recognizing his merit by whom his titles were increased to wear a button of the head rank, to manifest special regard, after which he was commanded to take control of the military affairs of Sze Chuen.

When We came to the throne he was immediately selected to take the office of Governor General of Sze Chuen 四川, proceeding to Shuk 蜀, at the head of the army, distributing rewards and punishments with discreet severity; whatever direction he took he was victorious, and the several rebellions from Tin 滇 and Ut 粵, (i.e. Yunnan and Canton,) were entirely suppressed by him, and in addition he passed beyond his own jurisdiction

into the departments and districts of Kansuh and Kweichow 甘肅貴州, to gain victories, and on account of the capture of the rebel "Shek" the territory of Sze Chuen 四川 was pacified. In accordance with his merits he was rewarded with the title of "Protector of the Heir Apparent," and after the capture of Nanking and the entire pacification of the southeast, remembering that in former years while holding office in Hunan 湖南 it was he who promoted the military leaders, that he was able to excite military awe, his patriotism and entire devotion were acknowledged by all, his diligence and toil were ever seasonable, and he was again rewarded to wear the double eyed peacock's feather, and granted the hereditary rank of first class, "Hing Kù To Waé" 輕車都尉, and during the autumn of the present year he was selected to the office of Cabinet Minister. He was long tried and much respected, and it was desired that he might be spared to a good old age, a support upon which to lean. Recently by reason of a return of his old complaint, he was granted a vacation for healing, and now it is reported that he has passed away. Having examined the document bequeathed by him, the consideration of his great goodness excites profound sorrow.

Let Lok Ping Cheung be granted the posthumous title "Instructor of the Heir Apparent," and let the obsequies be conducted according to those for Members of the Cabinet. All the censures which he incurred during his official life are entirely removed. It is proper that he should receive the Imperial bounty.

The Board in question is ordered to make examination of the regulations and report in full, and at the same time there is to be granted a posthumous name, and entrance into the Chapel of Worthies at the Capital, with special chapels to be erected in the provinces of Sze Chuen and Hunan, and the particulars of his official life are to be entrusted to the Imperial Historiographer. His son Lok T'in Po 天保 is granted the rank "Long Chung" 郎中, and after the period of mourning is passed he is to be employed in the service of the Boards. Lok Tin I 賂天貽 is granted the rank of "Kujin" 舉人, and after the period of mourning is past he is to be admitted fully to the examinations. The grandsons, Man Seung 懋湘, Man Kau 懋勸, Man Yan 懋仁, Man Fan 懋勳, are to be presented at court by the Board. His grand-nephew, Lok Chin Ts'un 賂肇銓, now waiting for selection as deputy district magistrate (tso-ting) 左堂, it is or-

dered that he be sent into the provinces to be appointed immediately as district magistrate.

The mortal remains are to be removed to his native place, and the local officials on the way are to give necessary attention, in which they are to manifest sincere and careful intention. Respect this.



ARTICLE VI.

THE TABLET OF YÜ.

By W. H. MEDHURST, Esq.,

H. B. M.'s Consul at Hankow.

Most persons who have given any attention to the subject of the ancient history of China must be familiar with the name of "Yü the Great," the founder of the Hia dynasty, (B. C. 2205,) and must have heard of the curious inscription in the "tadpole" character, said to have been traced by him, or in his time, upon a peak of the Hêng Mountain in the province of Hunan, and purporting to be a record (presuming certain interpreters of its eccentric character to be worthy of credit,) of the labour which Yü expended in rescuing the country from the waste and submerged condition in which tradition states it then stood.

Chinese archæologists, literati, and critics, ancient and modern, have looked into and discussed the question of the authenticity of this inscription, commonly known as Shenyu pai, or the Tablet of the sainted Yü, with a zeal and research which do them infinite credit, and foreign savans and sinologues have taken up the controversy as energetically in their turn; but to this day it remains a matter of doubt as to how far such an inscription ever had any existence, and at the same time a mystery as to what common origin, if any, may be ascribed the several reputed facsimiles, copies, or tracings, of the inscription which are undoubtedly to be found in various parts of the empire.

One of these copies or reproductions, from which the impression now presented to the Society (*see plate A*) was printed off under my directions, is engraven upon a stone tablet, which was not long ago erected by Kwan Wên, late Viceroy of Hukuang, upon the prominent eminence of Wuchang overlooking the Yangtsze, called the Huanghoh low, or pavilion of the Yellow Stork, and it may be interesting to institute a comparison between this copy and others accessible to foreigners, in order to ascertain how far the alleged copies at any rate agree one with the other, and therefrom to judge of the value of the claims which they one and all set up to a common origin. I have thus far only been able to get at one

other reputed copy, namely that in the possession of the Revd. Mr. Chalmers of Canton, a facsimile of which, reduced in size by photographic miniature, is published in Dr. Legge's Chinese Classics, vol. III, part I, pag. 73, where likewise the curious reader may find an exhaustive dissertation on the history and pretensions of this remarkable monument. It only needs a glance at the two copies, mine and that published in Dr. Legge's work, to satisfy the most sceptical that they are reproductions of some common original whatever or wherever that may be, although a close inspection reveals dissimilarities more or less startling in individual characters, as for instance in Nos. 6, 11, 12, 14, 15, 16, 17, 22, 24, 25, 27, 28, 30, 31, 35, 36, 39, 42, 44, 48, 51, 52, 53, 57, 58, 60, 61, 65, 66, 67, 69, 73, 74 and 75; that is in no less than 34 characters out of the whole 77. In judging of these discrepancies however, every allowance must be made for the deviations which would very naturally arise in the process of manual reproduction of such eccentric characters by various artists from copy to copy in the course of several centuries.

The notice by T'ang Siünfang, attached to my copy of the inscription (a translation of which I venture to furnish for the benefit of the uninitiated), although containing the usual admixture of sense and nonsense in which Chinese writers are so prone to indulge, presents a very interesting criticism upon the history and nature of the original inscription and the claims to credibility which the usually recognised interpretation of it is entitled to. Having been penned by an individual of both rank and education, who is a native of the locality in which the original inscription is said to be found, the notice is further valuable as throwing light upon the question of its actual existence on which Dr. Legge appears inclined to cast such grave doubts. On this point I may observe that a Chinese official of my acquaintance here, informs me that portions of the rock on which the ancient inscription is said to have been placed are still to be seen, and that a tablet with a reproduction of the inscription reduced in size, but faithful and entire is, as T'ang Siünfang states in his notice, to be found at this moment at the foot of the Häng mountain. My friend has a brother resident in that vicinity and he promises to use his influence in procuring me a rubbing of the reproduction at an early date.*

* This pledge was soon after fulfilled. A facsimile of the rubbing is shewn in plate B. It will be observed that this rubbing bears more marks

I have not thought it necessary to give a translation of the inscription itself as interpreted by Yang Shin and others, that duty having been already performed with such success by several foreign sinologues, as may be seen in reference to Dr. Legge's work already quoted, Dr. Williams's *Middle Kingdom*, and other works. The imprint I now present consist of, first, the copy of the inscription itself; second, the interpretation of it by Yang Shin; third, a poetic effusion in twelve lines by Kwan Wên, late Viceroy of these provinces, apostrophising the tablet; and fourth, the critical notice by T'ang Siünfang. Translations by myself of the two last will be found below. I may add for the information of persons unacquainted with Chinese peculiarities that imprints like the present one are taken with great facility by laying a sheet of thin porous paper upon the face of the stone which bears the inscription, and then rubbing it over with a bunch of tow filled with damp coloring matter. If carefully done the whole body of the paper takes the color, with the exception of those portions which cover hollows or depressions in the stone, and the consequence is that the imprint then comes out an exact facsimile of the original from which it is taken.

W. H. MEDHURST.

HANKOW, 29th February, 1868.

(TRANSLATION).

Lines by Kwan Wên of Liaou Tung.

Tablet of Yü, celestial gem, by earth preserved,
Now darkly hid, now manifest, ablaze with light.
Chiselled by sprites, by gods set up, but sealed to man,
Thy purple stone bears letters bright, a heaven-born theme.
Like pheasant, or like phoenix, fitting to and fro,
Their track a mystery; so who can trace thy path?

of authenticity than that shewn in plate A. In the latter, for appearance sake no doubt, all the characters have been more or less touched up, and those which happened to lie in the line of crack in the stone have been altogether supplied. It must therefore be pronounced comparatively worthless for the purposes of comparison or identification.

W. H. M.

Poised in mid air 'neath overhanging precipice,
 The mountain elves have ever had thee in their care,
 Penned in tortuous style, thy lines who can decipher?
 Gemmeous casket, tablet of gold, by sage employed,
 Thou keepest guard o'er hill of Hêng, and flood of Seang—
 Thy influence benign, like tripods nine of Yü,
 Sheds forth a light of noon day sun and silver moon.
 Thy style miraculous, with book of Lo can vie,
 From whence Fu-Hi of old his mystic model took.
 Thy characters in number three score ten and seven
 Tell how the waters, erst a raging roaring flood,
 Were led by art divine in useful streams to flow.

(TRANSLATION).

*Brief notice (of annexed copy of inscription) respectfully
 penned by T'ang Shünfang (late treasurer
 of the province of Hu-pih).*

The first notice on record of the "tablet of Yü" on the Hêng shan mountain is to be found in the history of Siang chung, (the modern Hu-nan) which states that researches in the work called Yü-tsze-t'ung prove it to have reference to the art of conducting water communication. The histories of Wu (the modern Kiang-su) and of Yüeh (the modern Chekiang) say the same. In none of these compilations however is any mention made of the existence of an inscribed tablet. T'sui Yung, who flourished in the time of the T'ang dynasty (A.D. 624-908) is the earliest writer who speaks of the characters being set in shell on a wooden frame; and Liu Yüseh and Han Yü (also two statesmen of T'ang) were the first to state that the inscription had been recorded and engraved. It follows that the people of the time of T'ang must have seen this rock, and the inscription which it bore.

The art of taking facsimile impressions was first introduced in the reign of Kia Ting of the Sung dynasty (A.D. 1208-1224), and the copy of the inscription obtained by this process, and subsequently engraven on stone in the monastery of K'wei môn, was of this period. The interpretation of the characters which formed the original inscription was first declared by Yang Shin and Shin Yi of the Ming dynasty (A.D. 1368-1644), and from

this source, sprung the numerous versions which have since been handed down. These two writers appear to have determined the identity of the seventy seven hieroglyphics in the original inscription from their fancied resemblance to known characters, and thus managed in most cases to frame intelligible sentences out of them. But they must have been ignorant of the six rules of etymology,* and they cannot have known any thing of the intonation in vogue in ancient days. I therefore consider their interpretation to be only worthy of ridicule.

The sainted Yü flourished several hundred years subsequently to the days of Ts'ang Keih (the inventor of Chinese writing) and although at that early period characters must have been eccentric and quaint in appearance, yet they no doubt possessed specific combinations and forms. No one at any rate ever heard of interpretations being needed of the characters in which the canons of Yaou and Shun were written, and it may be presumed therefore that the character in use in those ages nearly resembled the "bell and tripod" (commonly known as the "seal") characters, or perhaps those to be found in the Shwo-wên-kiai-tsze (a dictionary of definitions and explanations of characters, A. D. 121.) It is much to be regretted that Yang and Shin put forth the random interpretation of the inscription which is attributed to them, and thereby gave occasion for the contemptuous suspicions which have been cast upon the authenticity of the inscription itself by subsequent writers.

Recent investigations go to prove that the true rock on the Yun Meih peak (the site of the inscription) hangs half way up a high overhanging precipice, which seems to be on the very verge of falling. I would ask therefore of those who pronounce the inscription to be a counterfeit, whether it is probable that the persons who placed it there, whoever they may have been, would have risked all the danger and difficulty attending such an undertaking, to carry out a purpose which could bring them no possible advantage? Then again how is it to be explained that, instead of adopting the style of writing in use amongst the ancients, they preferred to invent a set of monstrous extraordinary characters such as those in the inscription, which, however likely to secure for their framers the commendation of the ignorant, would

* For these rules see "Curiosities of Chinese Etymology" by J. Edkins. Notes and Queries on China and Japan, Jan. 1868.

certainly be calculated to earn the profound contempt of the learned?

I, Siünfang, had my home close by the Häng mountain, and whilst yet a child deeply pondered this interesting subject, fondly hoping that I might perchance succeed in deciphering a few at any rate out of the many mysterious characters of which the inscription consisted. Having taken impressions of it, I passed days and nights in studying the shape of the several characters, and in searching in every direction for ancient manuscripts with which I might institute comparisons, and so determine the origin and identity of every one. After a careful examination into the nature and style of the characters, it occurred to me that they closely resembled those depicted in the "veritable illustrations of the five peaks" which one Paou-pu-tsze has handed down to posterity; and I then suddenly remembered how the ancients had said, "the draining of the waters was conducted upon principles laid down in gemmeous tablets and characters, which constituted mysterious talismans of the remoter ages." I thereupon at once concluded not only that the strange forms depicted in the inscription did not partake of the nature of characters, but that the opinion commonly prevalent, to the effect that the tablet had been inscribed by Yü in order to commemorate his miraculous deeds, was entirely groundless. The "Scheme" put forth by the Yellow River, (the fabulous origin of the eight diagrams of Fu-Hi) and the "Book" revealed by the River Lo, (the legendary derivation of the great plan of Yü) as well as the fairy characters and pearly talismanic signs found from time to time in the hearts of mountains in primeval ages, were imparted to the spiritual and holy men of old, in order to aid them in carrying out their miraculous undertakings; and is it for a moment to be supposed that the paltry attempt at interpretation by a common mortal could succeed in unraveling any of their hidden mysteries?

An analogous instance, corroborative of the fact that such miraculous inscriptions do exist, has occurred within the last few years at Yung-Ning Chow in Kwei-chow, where a peak called Hung Yen Shan, after a shower of rain, at sunrise and sunset, shews lines depicted upon its face, which, although not actually legible as characters, yet suffice to prove that some superhuman agency is being exercised.

Reputed impressions of the accompanying inscription have been reproduced in stone in some ten to twenty different localities in

the Chinese Empire. His Excellency Siu-fung (the late Viceroy Kwan) having shewn me one taken from the original inscription on the Yun Meih peak, and charged me with the duty of tracing in outline the several characters, and restoring any defective portions thereof, I made my tracings from an impression, which I had had for some time past by me, of an engraven copy on stone, which stands at the foot of the peak, merely reducing the characters somewhat in size, but adhering to their form and shape in every respect. When my task was completed I added this critical notice by myself of the ancient history of the inscription; and I appended a copy of Yang-shin's so called interpretation, not that I thought it at all worthy of record, but because of the long notoriety which it has enjoyed, and because I am anxious that those who are capable of forming a judgment may be in a position to test its credibility for themselves.



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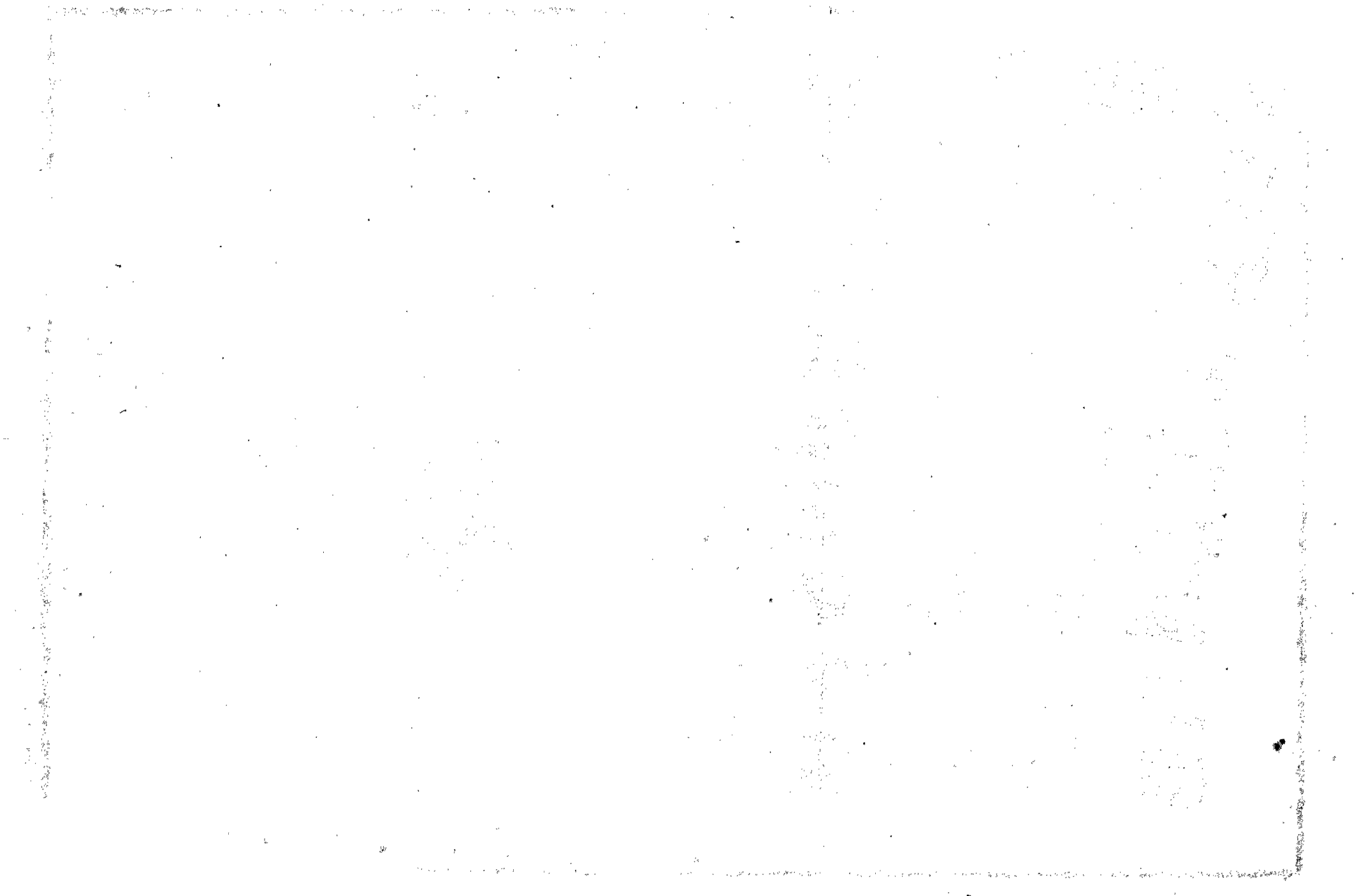
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楊慎釋文

承帝曰否翼輔佐卿州渚與登島獸之門參身洪流而明發爾與久
族忘家宿岳麓庭智營形折心悶曲辰往來平定華岳秦衡宗疏事
衰勞餘伸禮鬱塞昏徒南濱衍享衣制食備萬國其寧寶舞永奔

禹碑天寶地為藏隨時隱顯騰光芒鬼斧神工難測量石青字赤蘊天章鸞鳳泊跡渺茫山
靈呵護懸崖旁蝌蚪文字世莫詳玉函金簡鎮衡湘床同九鼎日月光體道洛書法義皇琅玕
七十七字香滔滔洪水開八荒

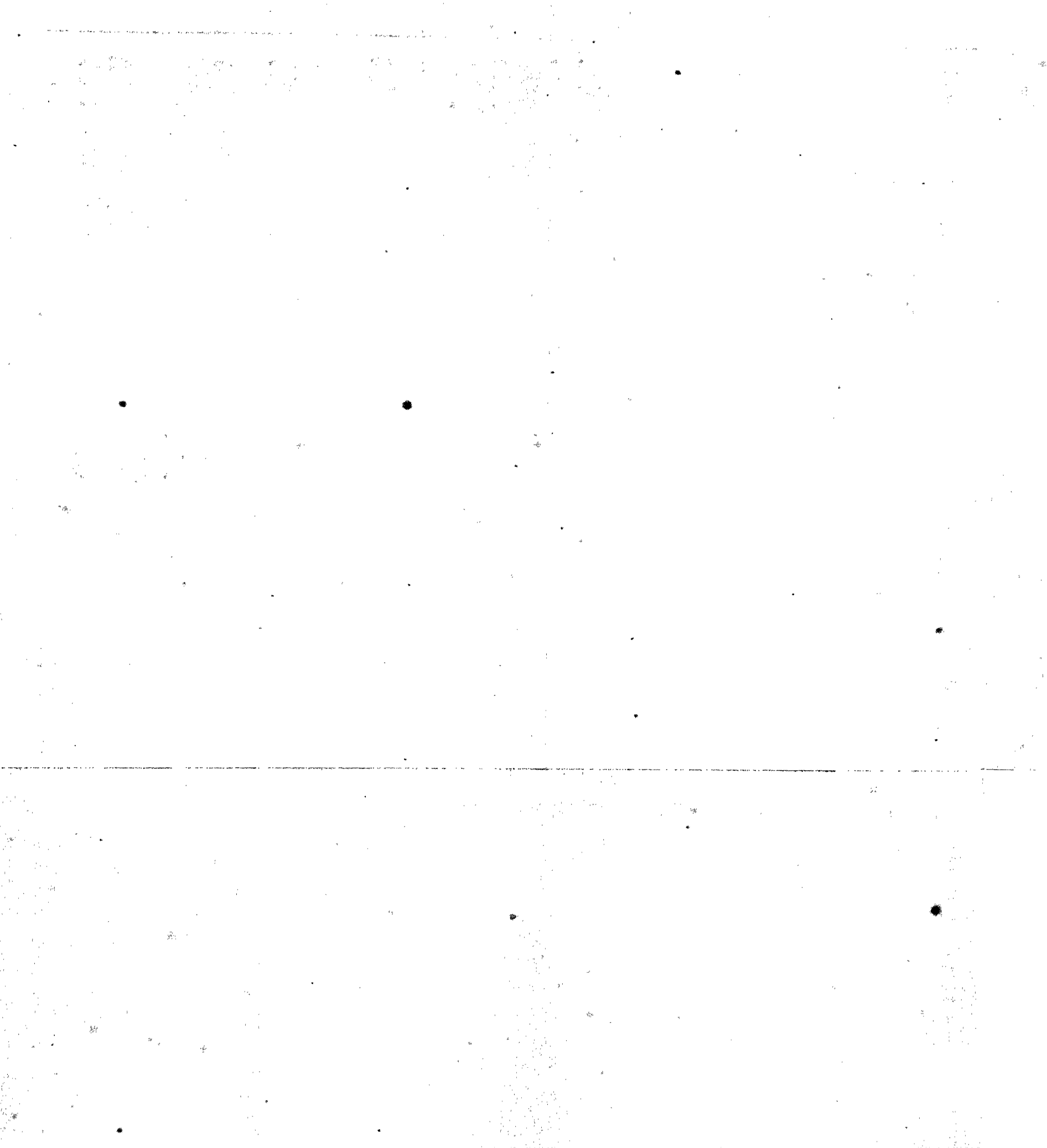
遼陽官文題




衡山禹碑始見稱於湘中記云按省玉字通水理也吳越春秋亦同但未有刻碑之文至唐崔融乃有鵠書扁刻之語而劉禹錫韓愈始云
有銘有碑則此石唐人蓋有見之者而拓本始於宋嘉定中模刻藝門亦在是時其釋文則始於楊慎沈鍊從此盛傳凡七十七字大抵依
據真書形象約略成詞未明六書未知古韻適可謂訕而已神禹去倉頡後數百年其時文字雖奇古亦必有偏旁形勢無疑覽典諸篇未
聞據釋知其時文字與商周鐘鼎款識及說文解字所載古籀文相同明矣不幸為楊沈妄釋使後人盡嗤此碑之偽今觀雲密峰真石在
縣嶽之半倒壓欲落作偽者未能艱險為無益如此且造字時亦安能不依古文而詭作雄獷以冀俗賞開指摘之門乎訓方居衡山之旁
少嘗深思頗釋出數字因取拓本日夜觀之搜攷古籍徵其由來諦觀意勢乃是抱朴子所傳五嶽真形圖然後恍然於古人所云玉滯玉
字業以治水者蓋上古符篆之秘果非文字而刻石紀功之經尤不足辨矣河出圖洛出書山開靈書珍符以佐神聖豈可以陋詞釋之乎
近年貴州永甯紅岩山於雨後日夕山石隱起有文示見神奇不成字法即其證也至此石拓本翻刻者天下有十數處此是雲密峰原石
秀峰節相師出以相示屬為鉤補泐處因取舊藏款麗刻石拓本鉤出字體差小形象不謬既鉤畢又題以昔聞跋於後方其釋文本不足
錄以流傳既久亦書於下以備鑒正焉

同治三年八月唐訓方謹記





PRÉFACE.



Après avoir étudié l'Assyrie, l'Égypte, l'Inde et tant d'autres anciens Empires avec un zèle et une puissance d'analyse aux quels nul secret n'a pu résister; après avoir fouillé le monde, hormis la Chine, c'est enfin vers elle que les savants tournent leurs yeux aujourd'hui. De tous côtés, se dressent devant elle, comme des échelles contre les murs d'une place investie, d'innombrables points d'interrogation. Déjà même les assaillants redoublent leurs coups, et l'on sent, à la rapidité avec laquelle ils se succèdent, le prix qu'ils attachent à cette dernière conquête et l'impatience qu'ils éprouvent de fixer enfin des solutions qu'ils ont suspendues jusqu'à ce qu'ils aient pu sonder cette immense énigme, si vieille et si longtemps oubliée.

J'ai voulu dans le travail que l'on va lire, montrer, à propos de la Géologie et de la Paléontologie, comment on pourrait répondre à ces attaques, non pas en y résistant comme on résiste à des dangers, mais comme on accueille l'arrivée d'amis mal disposés mais toujours attendus; en leur donnant un plan ou au moins une esquisse de la ville et en leur ouvrant les voies et les avenues qui leur sont préparés depuis tant de siècles.

Cette esquisse même ne m'a pas paru suffisante; et, afin qu'elle pût servir non seulement à eux, mais à leurs amis et à leurs serviteurs, je n'ai pas cru trop faire de chercher, autant que possible, à l'orienter et à y tracer çà et là, quelques points de repère.

Superflus pour ces savants et pour la plupart des membres de la société qui veut bien me permettre de placer ce travail sous ses auspices, ils pourront, toutefois, ne pas être inutiles pour beaucoup de personnes dont l'esprit et l'attention ont été jusqu'ici dirigés d'un autre côté, et qui, douées de la faculté d'observer, peuvent, dans leurs résidences ou dans leurs voyages en Chine, rendre d'importants services, pourvu qu'on leur explique bien ce que l'on désire d'elles.

C'est pour ces personnes, c'est dans l'espoir d'exciter leur intérêt en faveur des recherches qui nous occupent, que j'ai fait précéder les indications que je me suis cru autorisé, par mes lectures ou mes observations personnelles, à donner sur la Chine, d'une sorte d'exposé, aussi complet et en même temps aussi succinct que possible, du sujet, tel que les savants nous le font connaître dans les ouvrages dont j'ai cité les noms en tête de ma notice et aux quels j'ai emprunté sans scrupule et tels quels, les extraits qui m'ont paru nécessaires à mon but, bien sûr du pardon que ce but m'obtiendrait.

D'un autre côté le plan que me traçait cette manière de voir était celui qui pouvait le plus aisément m'aider à présenter aux savants d'une façon claire et logique, des détails dont quelques uns sont produits peut-être pour la première fois, et dont les autres paraissent avoir dormi, oubliés, dans les livres où ils y avaient été publiés en notre langue, il y a cent ou cent cinquante ans.

Ainsi ma notice n'est proprement et à très peu de chose près, qu'un cadre dans lequel j'ai tâché de grouper de façon à les éclairer les uns par les autres, en vue des maîtres et en vue des serviteurs de la science, les faits acquis et ceux que l'on peut recueillir en Chine.

NINGPO, 15 janvier 1869.

G. EUG. SIMON.

ARTICLE VII.

NOTE SUR QUELQUES UNES DES RECHERCHES QUE L'ON
POURRAÏT FAIRE EN CHINE ET AU JAPON
AU POINT DE VUE
DE LA GÉOLOGIE ET DE LA PALÉONTOLOGIE.

PAR G. EUG. SIMON,
Consul de France à Ning-Po.

OUVRAGES CONSULTÉS:

La paléontologie appliquée à l'étude des races humaines par Mr. G. de Saporta, 1868.—Les Glaciers et la période Glaciaire par Mr. Ch. Martins, 1867.—Un tour de Naturalistes dans le Nord par Mr. Ch. Martins, 1863.—Les Antiquités Egyptiennes par Mr. E. Renan, 1865.—Cours de Paléontologie par Mr. d'Archiac, 1864.—La Science des Religions par Mr. E. Burnouf, 1867 à 1868.—L'homme primitif par Mr. A. Maury, 1867.—Les Oscillations du Sol-terrestre par Mr. E. Reclus, 1865.—Le Voyage du Glacier par Mr. E. Rambert, 1861.—Le Dronte et les espèces perdues par Mr. Radeau, 1866.—Les Etudes et les Découvertes archéologiques récentes dans le Nord Scandinave par Mr. A. Geffroy, 1862.—Cours d'Anthropologie par Mr. de Quatrefages, &c., &c.—Mémoires concernant les Chinois par les anciens Missionnaires Jésuites.—Le Chou-king.—Recherches sur les temps antérieurs à ceux dont parle le Chou-king par le Père de Prémare.—Notice sur l'Y-king par le Père Visdelou.

“Toute Doctrine a pour base les merveilles de la Création; pour raisonner sur l'Homme, il faut commencer par la manière dont il a reçu l'être.”
Début du Tehi-pen-ti-kang. V. les Mémoires des anciens Jésuites: Tome 11, page 385.

NOTRE temps ne s'illustre pas seulement par les découvertes de l'Industrie. Sans vouloir en dire plus de bien que de raison, il n'est que juste de signaler comme un de ses plus grands titres de gloire pour le présent, et comme l'un des mérites dont l'avenir lui tiendra le plus de compte, les études qu'il a entreprises depuis une trentaine d'années sur toutes les questions qui se rapportent à l'homme, à son origine, à sa nature et à son histoire.

Que sommes nous?—D'où venons nous?—Quels étaient nos ancêtres?—A quelle époque avons nous été placés sur la terre? Comment sont nées les diverses races qui composent l'humanité?

qu'est ce que les différences qui les séparent? les rapports qui les unissent? Tel est, sous quelques unes de ses faces, le problème qui s'impose aujourd'hui aux esprits les plus sérieux avec l'énergie de la pensée qui se sent mal étayée par d'anciennes croyances, déconcertée par de récentes découvertes, avec l'attrait du plus obscur et cependant du moins indifférent des mystères. Tel est le terrain sur lequel les sciences en apparence les plus diverses, l'archéologie, la linguistique, l'anatomie comparée, la géologie, la paléontologie, l'ethnologie et la critique historique se donnent aujourd'hui rendez vous.

Les réponses de la Bible, trop étroitement interprétée, ne les satisfont plus.

On disait l'homme nouveau sur la terre; on le représentait déchu du haut état physique et moral dans lequel il aurait d'abord été créé; on parlait d'une catastrophe épouvantable engloutissant d'un coup toute sa race; on rejetait comme autant de fables indignes de toute croyance, les légendes de l'antiquité qui nous le montraient au contraire, ignorant et sauvage, acquérant ses idées lentement et comme siècle par siècle; et les vieux mythes de Janus, de Saturne, de Ménès, de Prométhée, de Cérès et de Triptolème étaient relégués parmi les conceptions les plus ridicules du paganisme. "Il y a dix ans à peine, les découvertes relatives aux premiers âges de l'humanité étaient encore frappées d'une sorte de discrédit; on souriait en parlant des objets que certains savants voulaient faire passer pour des instruments primitifs. Maintenant, après avoir vu les parties de la dernière exposition consacrées aux plus vieux spécimens du travail de nos ancêtres et les magnifiques salles du Musée de St. Germain, on est saisi d'étonnement comme devant une révélation inattendue. On est surpris que l'ignorance ou les préjugés aient pu si longs temps dérober la signification de tant de vestiges, armes, ornements, utensiles de toute nature, en silex taillé ou poli, en jade, en serpentine, les uns informes, d'autres d'un fini qui en fait de véritables objets d'art. On ne comprend pas qu'une opinion presque générale ait pu naguère encore circonscrire dans d'étroites limites le passé de notre espèce."

L'Antiquité avait raison: dépouillées de leur caractère symbolique ou allégorique, ses fables sont vraies. L'homme que nous connaissons n'a point été créé; des centaines et peut-être des milliers de siècles l'ont lentement produit; c'est peu à peu que, sous l'influence du choix divin qui le distingua des autres êtres, la religion, la civilisation, les arts se sont révélés à son esprit. Ce

n'est que trait par trait, progressivement, que son corps perdit les caractères de l'animalité qui l'étreignait; que, sous l'effort de son intelligence fécondée de ce même souffle divin, son crâne se développa, son angle facial s'ouvrit et qu'enfin se grava sur son front l'empreinte désormais ineffaçable, mais de plus en plus marquée, de celui qui le tirait ainsi des ténèbres et du chaos. Ce n'est que degré à degré qu'il sortit des cavernes où il habitait, descendit des arbres où il perchait, pour fonder dans les plaines les sociétés puissantes que l'on connaît; les six journées de la création ne sont point finies; il n'y a pas eu de déluge universel et les listes généalogiques de la Bible n'indiquent et ne rappellent bien décidément que des races et des époques indéterminées et non de réelles individualités.

Voilà ce que nous enseignent les travaux des d'Archiac, des Grimm, des Burnouf, des Brandt, des Max. Müller, des Ewald, des Pictet, des Lyell, des Martins, des Middenhorf, des Wilson, des Darwin, des Maury, des Aguassiz et de tant d'autres savants éminents.

Voilà ce que prouvent jusqu'à la dernière évidence, les témoignages les plus authentiques, les pièces de conviction les plus diverses, et, en particulier, celles que la Géologie et la Paléontologie ont déjà recueillies dans toutes les contrées du monde qu'elles ont pu explorer et dont les spécimens les plus nombreux et les plus complets sont réunis en France au château de St. Germain.

Voilà ce que démontrent encore tant de races inférieures éparses sur le globe, et qui en disparaissent sous nos yeux sans y avoir été autre chose que les ébauches successives, maintenant inutiles, dont la Création s'est servi pour arriver jusqu'à nous.

Mais quel est l'objet, quel sera le résultat final de toutes ces recherches et de toutes ces découvertes? la vérité d'abord, la vérité pour elle même, la vérité qu'il n'est permis à personne de mettre sous le boisseau et dont, sous aucun prétexte, il n'est permis à personne de retarder l'avènement; la vérité vers laquelle à travers ses erreurs et obéissant à la même loi que celle qui entraîne les corps vers le centre de la terre, l'esprit humain gravite avec une force aussi irrésistible. Ce but se consacre de lui même, et, bien qu'il soit le seul peut-être, pour le moment, qui s'offre clairement à nos désirs, il suffit à les légitimer et à les ennoblir. Cependant il est des conséquences d'un ordre moins abstrait qu'il n'est pas absolument impossible de pressentir dès maintenant. La pensée se trouble bientôt lorsqu'elle envisage les questions que je formulais

si brièvement tout-à-l'heure. On ne songe pas sans anxiété aux solutions dont elles peuvent être suivies, aux profondes modifications qu'elles devront faire subir aux idées dans lesquelles les sociétés modernes ont été élevées. Il est douloureux de renoncer à d'anciennes croyances; mais c'est un insupportable supplice que de ne pas savoir comment elles seront remplacées. Il est urgent d'y mettre fin au plus tôt.

D'un autre côté, si malgré tant d'efforts et de progrès accomplis dans les sciences et dans les arts, l'humanité est encore si peu avancée que ses efforts et ses progrès semblent se tourner contre elle même; s'il nous faut encore entendre de peuples à peuples, ces mêmes explosions de haines qui ensanglantèrent son enfance et firent chanceler ses premiers pas; si enfin l'aiguille du temps paraît avoir vainement pour la paix des esprits et des cœurs, marché sur le cadran des siècles, ne serait ce point pour avoir trop long temps ignoré quelques uns des rayons dont, comme la lumière, la vérité se compose?—Qui voudrait aujourd'hui surtout que les plus graves événements se chargent de nous les rappeler, nier par exemple et sans aller plus loin, les rapports de la politique avec les sciences ethnographique, sociale, géographique, religieuse, &c.? Et si chaque science et chaque vérité sont à ce point constitutives de cette vérité générale dont il importe de s'éclairer en toutes choses, à quel point la science de l'homme, la science qui lui apprend à se connaître dans le temps et dans l'espace n'est elle pas essentielle? Peut-être ne lui sera-t-il jamais donné de découvrir le mot de sa destinée; rien toutefois ne saurait lui en faire concevoir une idée plus haute et plus consolante que la connaissance de ses origines. Si elles lui montrent qu'il n'a point, ainsi que je le disais tout-à-l'heure, fait exception à l'unité, maintenant à peu près démontrée, du plan de la création; s'il y reconnaît que son apparition sur la terre n'a pas été subite, mais lentement amenée, suivant une loi de développement que Dieu semble s'être imposée et dont nous n'avons pas à lui demander compte, elles le convaincront de plus en plus, de la nécessité de son incessante et toute puissante intervention. Ce n'est qu'en se reportant à la faiblesse de ses premières années que l'homme a réellement conscience de ce qu'il doit à sa mère. De même il se rapprochera de ses humbles débuts, il s'identifiera avec ses premiers modes d'existence, il contraindra son imagination à se reporter au milieu de ceux avec lesquels il a commencé de vivre, et, sous ses horribles étreintes, dans cette hideuse promiscuité, il sentira, de qui était,

de qui devait être le bras qui pût le dégager de ces étouffantes entraves, et, suivant les expressions de l'Ecriture, le tirer "d'entre ces démons muets" les sinistres "*Velus*" dont il ne différerait que par de vagues inquiétudes et le sentiment de son impuissance. Puisant dans un long passé l'irréfutable certitude d'un auxiliaire supérieur et dans la distance qui l'éloigne de son point de départ une confiance inébranlable en l'avenir, ses espérances n'auront d'autres limites que les bornes mêmes de ses aspirations actuelles. Je ne sais si je m'abuse, mais ces travaux de l'humanité sur elle même, ces efforts de l'humanité qui se cherche au travers des siècles, ont quelque chose de touchant et de grave qui me paraît déjà autoriser les perspectives les plus rassurantes. Les haines s'émoussent devant la mort, on se réconcilie sur un tombeau; sur les ossements de nos ancêtres, sur les reliques qu'ils nous ont laissées, nous abjurerons tous au nom de la vérité, nos erreurs, nos rivalités inutiles et nos ambitions sans but. En présence de leurs restes confondus, nous porterons nos vues au de-là du présent instable et fugitif, et, nous élançant vers l'avenir, le jugement de la postérité deviendra la raison de nos actes et le salaire de nos services.

Sous les réflexions enfin qu'évoquent ces vestiges des temps passés, j'entrevois le temps où chacun n'aura d'autre émulation que l'émulation des grandes choses, et où, plaçant dans le sépulcre sa plus noble ambition, n'aura d'autre désir que celui d'une belle mort, sereine, chargée de guirlandes et des bénédictions du monde.

Mais c'est assez nous attarder à ces rêveries. Elles se réaliseront de la même façon que je viens, sans y prendre garde, de m'y laisser entraîner. Ce n'est qu'en se reportant aux cieux que le regard se repose des profondeurs. Le charme de l'infini est trop grand, l'œil qui s'y est abandonné ne s'en détache qu'avec peine et en garde long temps le reflet. Ainsi, placé entre le passé qui se découvre seulement et le futur qui se jalonne, reflétant les souvenirs du premier et les espérances du second, le présent qui n'était, pour ainsi parler, qu'un battement entre ces deux éternités, s'harmonisera avec l'une et avec l'autre et en formera l'heureuse modulation.

Cependant de quelqu'attente que puisse nous remplir les récentes conquêtes accomplies dans les différents domaines de la Science de l'homme, quelque fiers que nous puissions en être, il faut reconnaître qu'elles sont encore très incomplètes, et, bien que je n'aie semblé jusqu'à présent que vouloir en faire ressortir l'import-

tance ou pressentir les résultats, je n'ai précisément pour but que d'indiquer quelques unes des lacunes qu'elles présentent dans le champ spécial de la Géologie et de la Paléontologie.

C'est là d'ailleurs qu'elles sont peut-être le plus regrettables, car c'est de là que sont sorties les découvertes du plus haut intérêt. L'Etude des langues et des traditions dont le secours est si nécessaire pour les temps modernes ne peut en effet presque rien apprendre de l'homme au delà des commencements des sociétés actuelles, car l'Écriture qui seule pouvait nous en conserver des traces n'existait pas. L'Archéologie elle-même, dans ses monuments les plus anciens, ne nous montre l'homme qu'arrivé déjà à un état social relativement civilisé, mais l'histoire de l'homme dans les âges antérieurs, aux époques où la pierre taillée par éclats, puis la pierre polie, étaient les seuls produits de sa rudimentaire industrie, l'étude du sol où on les recueille et avec lequel elle se confond peut seule nous le révéler.

C'est de là qu'elle se dégage, non plus siècles par siècles, mais par longues périodes, par succession de phénomènes; c'est de là que l'humanité, d'abord incertaine, émerge peu à peu du fond obscur où ses germes dormaient ensevelis, de là qu'elle sort enfin de plus en plus visible pour entrer dans la voie du progrès qu'elle n'a plus quittée.

I.

Il existe, disais-je tout-à-l'heure, dans l'ensemble des observations sur lesquelles s'appuient les sciences dont l'histoire de l'homme est l'objet, un certain nombre de lacunes qui la laissent incomplète, et si, malgré cela, les conclusions que l'on peut déjà tirer des faits acquis sont assez assurées pour n'avoir à redouter aucun démenti des observations contingentes, elles n'en présentent pas moins un aspect tronqué d'autant plus fâcheux.

Toutes les contrées de l'Europe, une grande partie de celles de l'Amérique, et quelques unes de l'Afrique elle-même ont été explorées et ont fourni à l'étude une masse de documents de toutes sortes.

L'Asie, sauf les Indes, est restée à peu près muette. On ne sait rien ou presque rien du continent le plus étendu, du continent qui fut le berceau de notre espèce et tout au moins celui de la société civilisée, rien ou presque rien des mille peuples, peuplades ou tribus qu'il recèle, de leurs origines, de leurs langages, de

leurs traditions. On ne sait rien surtout de la Chine, de cette doyenne des nations dont l'immense territoire aussi bien que l'histoire "la plus authentique et la plus reculée qui soit au monde," touche par tant des points aux lieux du globe les plus anciennement habités, et dont les légendes si claires et si transparentes pourraient, maintenant que l'on sait lire dans les légendes, livrer de si précieux renseignements. Dans le peu que nous en savons, que de simplicité, de naturel, de vérité! Point ou peu, très peu de ces interventions surnaturelles si fréquentes dans les histoires des autres peuples, si difficiles à admettre et si fécondes en disputes. Dieu reconnu, il suffit; la loi donnée, on y obéit; le mot d'ordre reçu, on le suit; et tout cela sans bruit, sans fracas. Tout s'enchaîne et se succède, lentement mais progressivement, comme partout, comme dans la nature entière. C'est évident, et l'on dirait presque que tous ces silex, ces ossements n'ont été mis au jour que pour servir de pièces justificatives à l'histoire légendaire de la Chine.

À quoi bon d'ailleurs ces brusques révélations, ces prodiges et ces miracles qu'on pourrait appeler arbitraires tant ils sont subits? Toutes ces évolutions que notre ignorance nous forçait à entasser et à comprendre en un pauvre cadre étroit de 6,000 années et qui auraient choqué notre bon sens comme elles se heurtaient elles mêmes, s'accomplissent ici en des éternités de cent, de deux cent soixante seize mille ans? Dix-huit mille ans pour seulement débrouiller le chaos!! Nous voici bien loin de compte... Plus tant aujourd'hui cependant, puisque les dernières découvertes faites par un prêtre, Mr. l'abbé Bourgeois, indiquent la présence de l'homme jusqu'en plein terrain miocène et que, se fondant sur d'autres vestiges trouvés dans le *drift*, Mr. Lyell le fait remonter à deux cent mille ans *au moins*!

Et l'homme, le premier homme que nous nous représentions, si beau, si brillant des mille facultés dont nous l'avions cru doté tout-à-coup, quelle déception! Est-il possible, est-il raisonnable de penser que Dieu ne l'ait créé si parfait que pour le défigurer immédiatement et ravalier, même ses traits, presque jusqu'à ceux de la brute, jusqu'à ceux dont nous pouvons nous faire une idée d'après les crânes d'Engis (Liège), de Neanderthal (Allemagne Eberfeld), d'Eguisheim (Colmar Rhin) des Eyzies (Dordogne)?

En Chine, point de ces contradictions embarrassantes pour l'esprit, injurieuses pour la providence.—Pan-kou, c'est l'homme idéal, le type qu'il doit réaliser; il n'a été créé qu'en esprit, son âme

seule a existé; c'est elle qui se dégage, générations par générations *du chaos où elle est enfermée et qui a la forme d'un œuf*, c'est elle qui les anime peut-être. Mais le premier homme créé, Fou-Hi, avec son énorme tête et son corps de serpent? C'est presque un tétard. On est stupéfait en vérité! Eh quoi, il y a quelques années à peine que nous connaissons cette loi d'après laquelle tous les individus des créations supérieures revêtent dans les différentes phases de leur existence embryonnaire les formes principales des créations inférieures; il nous a fallu, pour cela, le secours de tous les progrès accomplis depuis vingt siècles de civilisation et d'efforts en tous sens, et nous la trouvons aujourd'hui, cette loi, illustrée par les conceptions les plus anciennes! Elles nous montrent l'homme se formant au sein de la nature, sa première mère, comme l'enfant se forme dans le corps de la femme! Et qu'on le remarque bien, ce n'est pas simple hasard. Si toutes les métamorphoses du fœtus ne sont pas indiquées, il y en a une autre qui n'est pas moins frappante que la première, c'est Chen-Nong, qui succède à Fou-Hi, et qui naît avec un corps d'homme et une tête de taureau.

Les transitions de l'œuf à l'homme sont, on le sait, plus nombreuses, néanmoins les principales, les extrêmes sont bien représentées. Homme dès la cellule, Pan-kou en sortant, prend la forme des animaux les plus infimes, des ovipares, avant d'arriver à celle des animaux supérieurs, des mammifères. En Chen-Nong, le plus fort est fait, homme par le corps, les pieds et les mains, n'ayant jamais cessé de l'être par l'essence, par l'âme, qu'importe la face et le crâne de Pan-kou? Peu à peu le diamètre antero-postérieur du crâne, plus grand que le diamètre transversal, comme dans le crâne de Neanderthal, diminuera; peu à peu, la voûte crânienne s'élèvera, la saillie des arcades sourcillières disparaîtra, le front s'élargira, les parois de la boîte osseuse deviendront plus minces, comme dans les crânes des Eyzies, &c.

Je ne sais, mais cette étonnante concordance me paraît avoir, plus j'y songe, quelque chose de terrifiant. Est-ce donc en effet que l'homme s'est ainsi développé? ou bien, ne faut-il voir dans cette conception, infiniment supérieure à celle de l'Hanouman de l'Inde, que le sentiment, mais le sentiment admirable, prodigieux, inouï, du plan de la création qui ne semble ordonné que par rapport à l'homme en qui il se résume, s'incarne et trouve son couronnement.

Ce n'est pas tout, mais le peu qui précède me fait trop prévoir les difficultés que je rencontrerai en continuant cette esquisse, si je n'essayais de résumer d'abord en aussi peu de mots que possible,

et en les limitant, ainsi que je l'ai déjà dit, à la Géologie et à la Paléontologie, les données les plus nouvelles et les plus essentielles de nos connaissances.

Deux grands phénomènes dominent toutes ces recherches; l'un est le phénomène de l'oscillation du sol, l'autre celui des Glaciers.

Le sol qu'on est habitué à regarder comme immuable est au contraire dans un état constant d'oscillation. Sans parler des tremblements de terre et des autres mouvements dus à des causes tout-à-fait locales ou spéciales, comme ceux qu'y déterminent les courants de chaleur, d'électricité, &c., l'enveloppe de la terre, sollicitée d'un côté par les astres, comprimée de l'autre par la vapeur, les gaz et les matières fondues de l'intérieur du globe, ne cesse d'onduler comme le ferait un radeau s'élevant et s'abaissant sur les eaux de la mer. Les changements de niveau du golfe de Bothnie et de la Baltique, qu'on attribuait autrefois au retrait et à la dépression des eaux de la mer, ne sont au contraire que les conséquences des mouvements de la terre. Il ne faut, pour s'en convaincre, que remarquer que la diminution n'est point égale sur le pourtour de la presqu'île Scandinave, comme cela devrait être s'il était vrai que les eaux, toujours horizontales, se retirassent. Et non seulement elles ne se dépriment pas partout également, mais, en certains points, comme à la pointe de la Scanie, elles recouvrent graduellement le sol. Ainsi, plusieurs rues des villes de Malmoë, Trelleborg, Ystad ont déjà disparu; et depuis les observations faites du temps de Linnée seulement, la côte a déjà perdu une zone de trente mètres de largeur. Ces balancements ont lieu, on le sait, en des temps excessivement longs. À l'extrémité septentrionale du golfe de Bothnie, le continent émerge de 1^m 60 en cent ans, par le travers des îles d'Oland de 1^m seulement, à la pointe terminale du Jutland de 30 centimètres. Dans l'île de Munkholm il n'a pas varié de 6 mètres en 1,000 ans.

Si lents qu'ils soient, ils arrivent cependant à élever jusqu'à 200, 300 et 414 mètres au-dessus du niveau de la mer, ainsi que le montre la récente découverte de Mr. Derbishire, non loin du Snowdon, les polypiers et les coquilles qui ne peuvent vivre que dans ses profondeurs et que nous foulons chaque jour à nos pieds. En même temps, les forêts de pins qui couronnent les hauteurs des montagnes sont aussi exhaussées jusqu'à la région des neiges éternelles où elles ne peuvent végéter, dépérissent peu à peu et de larges lisières de forêts ne se composent plus que d'arbres morts, quoique restant encore debout depuis des siècles. Ainsi s'ex-

pliquent les solutions de continuité entre certains continents et entr'autres la séparation de la France et de l'Angleterre; ainsi s'explique la présence au milieu des continents, des vastes étendues de sable du Sahara, du Cobi, autrefois fonds de mer comme la Scandinavie elle même. Il serait facile de multiplier les preuves et les exemples de l'oscillation du sol. Toutes les contrées du monde nous en offrent aujourd'hui à profusion, mais on ne les demande même plus à titre de preuves et elles ne nous étaient nécessaires qu'à cause des circonstances qui s'y rattachent et qui nous intéressent plus directement. Il suffira donc de les avoir rappelés.

Nous pouvons cependant remarquer en passant, que c'est déjà par centaines de siècles qu'il faut compter l'existence du monde. Mais l'oscillation à laquelle a succédé l'époque quaternaire qui nous reporte si loin, n'est pas la seule qui ait eu lieu. En 1819, en creusant un canal de communication entre le lac Maëlar, près de Stockholm, et la Baltique, on traversa, près du village de Soedertelje un osar ou banc de sable émergé et couvert de blocs erratiques portant des arbres séculaires. Les déblais de la tranchée mirent à nu dans le sein même du monticule et à 18 mètres au dessous de la surface, la charpente en bois d'une hutte renfermant un foyer formé de pierres disposées en cercles et de bûches carbonisées. En dehors de la hutte on découvrit des branches de pins coupées; quelques débris d'embarcations dont les parties étaient assemblées par des chevilles en bois, gisaient devant la porte. Les conséquences de ces faits sont évidentes. Quand un pêcheur habitait cette cabane, elle était émergée. Ensuite elle s'est enfoncée et a été couverte d'une épaisseur de 8 mètres de graviers; puis la côte où elle se trouvait, s'est lentement soulevée et l'a ramenée à son niveau primitif. D'autres faits sont depuis venus s'ajouter à celui-là, tels par exemple que les vestiges d'habitation ramenés du fond des lacs de la Suisse et de la Savoie.

Dans la partie du monde que nous habitons, on pourrait entre autres faits que des observations suivies feraient certainement apercevoir, citer au Japon la grotte située à l'entrée de la baie de Nagasaki et dont l'ouverture récente, au dire des Japonais, grandit et s'élève assez sensiblement; en Chine l'exhaussement et l'agrandissement de l'île de Tsom-Ming, l'émergement de l'Archipel des Chusan qui finira par être rattaché au continent; l'élévation du fond des golfes de Leo-Tong et du Pe-Tcheli, la présence de roches madréporiques signalées par quelques missionnaires, et notamment, si mes souvenirs sont exacts, par l'abbé Huc, jusqu'au

sommet de certaines montagnes de la Chine; la présence de coquillages marins, dont Mr. le Dr. Lamprey et Mr. Kingsmill nous ont ici même, fait connaître quelques espèces, les cavernes élevées et remplies, si nombreuses dans la plupart des provinces, les espèces marines de poisson et de crustacés qui existent aujourd'hui encore dans les lacs salés des hauts plateaux de la Mongolie, au nord de Lama-Miao; et enfin et surtout le déplacement actuel de l'embouchure du fleuve Jaune qui recule, en causant de si grands ravages, comme le Soane de l'Inde, lequel a reculé de 7 kilomètres depuis 80 ans.

Ainsi la *subsidence* du sol, le va et vient de ce majestueux balancier a été complet et nous voici forcés de doubler le premiers temps de l'oscillation, et l'homme existait déjà, et nous n'avons point tenu compte des temps de repos entre chaque mouvement de bascule!

Nous devons maintenant nous occuper des périodes glaciaires dans lesquelles nous retrouverons non seulement aussi la présence de l'homme mais les preuves d'oscillations plus anciennes.

Mais avant d'en parler, un rapprochement m'obsède dont je veux me débarrasser en le disant. Tout naturellement, à propos du phénomène auquel je viens de m'arrêter les mots de *changement*, d'*oscillation*, de *bascule*, de *balancier* se sont présentés à mon esprit et sous ma plume; eux seuls pouvaient faire comprendre ce que j'avais à décrire. Il y en a un autre cependant devant l'emploi duquel j'ai reculé et que j'ai rayé vingt fois. C'est le mot de *pendule*. Pourquoi ai je ainsi hésité?

Par la seule raison que *pendule* est la signification du mot *koua*, nom des trigrammes de Fou-Hi, qui ont inspiré le livre canonique des changements, le plus vieux des livres, puisqu'il remonte à 3,000 ans avant J. C., l'Y-king, lequel a été fait pour montrer comment et sans cesse "ce qui est *dessous* vient *dessus* et ce qui est *dessus* passe *dessous*, livre que l'on appelle encore: *Livre des principes*, *Livre des combinaisons*, *Livre du passage perpétuel du repos au mouvement et du mouvement au repos*, *Livre des Générations et Corruptions*, &c."

Je confesse ma faiblesse.

Qui sait d'ailleurs si ce livre paraîtrait aussi incompréhensible qu'autrefois et aux Chinois eux mêmes, à ceux qui, possédant les lumières fournies par les sciences modernes, en liraient les commentaires de Ouen-Ouang, de Tchéou-Kong et de Confucius, c'est-à-dire par de trois des plus beaux génies que l'antiquité connaisse en philosophie, en politique, en physique et en morale. Je sais que

ce livre des changements est devenu le livre des sorts et que si on a égard à la composition du caractère chinois *koua*, on peut voir qu'il est formé de la lettre *pou* qui peut signifier sort; mais il est certain que ce livre n'est devenu le livre des sorts que lorsqu'on a perdu l'intelligence de son véritable sens, et ce n'est ensuite que pour mettre le nom des hexagrammes en rapport avec leur amplification ainsi faussée, qu'on l'a écrit par le caractère en question qui satisfaisait au but qu'on se proposait, tout en conservant son ancienne prononciation. En tous cas, le bon sens ne se refuse-t-il pas à admettre que des génies tels que Tchéou-Kong, Ouen-Ouang et Confucius s'en fussent occupés, si ce livre n'eût été qu'un livre de sorts.*

Je reviens aux périodes glaciaires.

II.

La connaissance d'une période glaciaire embrassant les deux hémisphères du globe et postérieure à l'apparition de l'homme sur la terre, est une des plus belles conquêtes de la Géologie moderne.

* À l'appui de ces réflexions je citerai le passage suivant des observations de physique de l'Empereur Kang-Hi, traduit dans le Tome IV des Mémoires des anciens Jésuites; pag. 474.

"TARTARIE ORIENTALE.—En s'avancant du rivage de la mer Orientale, vers le Tchélou, on ne trouve ni ruisseaux, ni étangs dans la campagne, quoiqu'elle soit entrecoupée de montagnes et de vallées. Malgré cela on trouve fort loin de la mer dans le sable, des écailles d'huitres et des cuirasses de cancre. La tradition des Mongouls qui habitent ce pays, porte qu'on a dit de tout temps, que, dans la haute antiquité, les eaux du déluge avaient inondé cette plage et qu'après s'être retirées, les endroits, où elles étaient, avaient paru couverts de sable. Je me suis souvenu à cette occasion que la figure *Kien* (fosse) des Hunt-Kono de l'Y-King est mise dans le Nord; et c'est pour cela qu'il est dit que les grandes eaux vinrent du Nord et y restèrent plus long temps. Selon *Mong-Tsé*, les eaux du déluge s'étendirent sur la Chine en l'inondant. L'expression (s'étendirent en l'inondant) *Fan-Kien*, indique qu'elle était plus basse et qu'il y avait une source ou un amas d'eau d'où venait l'inondation. Quoiqu'il en soit du comment, à s'en rapporter à la grande géographie Ti-Chi, une partie de ce pays est une grande plaine où l'on trouve plusieurs centaines de lieues que les eaux ont couvertes et puis abandonnées; voilà pourquoi on appelle ces déserts *Mers de sable*, ce qui indique qu'ils n'étaient pas couverts originairement de sable ni de gravier."

On trouve encore dans les commentateurs de l'Y-king l'expression Kueï-chin qui désigne les propriétés que possède la Nature de s'étendre et de se contracter. "Et par cette extension et cette contraction qu'ils appellent *l'allée et la venue* ou le systole et le diastole de la Nature, ils figurent les vicissitudes de la Nature dans ses générations et corruptions alternatives."—*Notices sur l'Y-king.*

On sait depuis peu que les Glaciers non plus que la croûte terrestre, ne sont immuables et que ce sont des fleuves qui marchent. On en a les preuves par les empreintes, les stries qu'ils tracent sur les roches entre lesquelles ils sont encaissés, et surtout par les masses de débris et les blocs énormes qu'ils transportent. Or, il existe dans certaines zones de l'Europe et de l'Amérique, et nous pouvons ajouter de l'Asie, des moraines ou amas considérables de pierres venues de fort loin, puisque dans ce qui les entoure on ne voit rien qui leur ressemble; on remarque sur les flancs des montagnes ou des rochers à l'extrémité desquels ils sont déposés, des marques identiques à celles que laissent les glaciers actuels; et quoique le fleuve de glace n'existe plus, on est bien forcé de reconnaître qu'il a existé.

Il a donc été une époque où les Glaciers recouvraient une surface beaucoup plus considérable qu'aujourd'hui et où les calottes des glaces polaires investissaient en Europe: toute la presqu'île Scandinave, la Finlande, la Russie Orientale, l'Ecosse, l'Irlande, le Nord de l'Angleterre; en Amérique: le Labrador, le Canada, et les Etats-Unis jusqu'à la latitude de New-York. C'est à cette époque que l'on a donné le nom de période glaciaire. Les observations que j'ai pu faire me permettront d'en compléter en partie l'aperçu en y ajoutant pour la première fois, je crois, tout le désert de Cobi et une partie de la Chine jusqu'à la latitude de Pékin, au nord; et à l'ouest, quelques hautes vallées du Thibet et celles du Kan-sou, du Chen-si et du Se-tchuen, jusque près des bords du Yang-tse-kiang. On rencontre en effet à 60 ou 70 kilomètres au nord de Pékin, à Tcha-tao, nom qui veut dire "Passe des pierres," des moraines ou dépôts de pierres, de cailloux roulés et des blocs d'une grosseur prodigieuse dont on ne pourrait s'expliquer ni la masse énorme, ni la quantité, ni la nature, si l'on ne savait maintenant qu'ils ont été empruntés à certaines montagnes de la Mongolie, et peut-être même aux montagnes de la Sibérie.

Ces moraines qui se prolongent à l'Ouest et à l'Est suivant une ligne de front que je n'ai pu suivre, seraient, si je ne me trompe, une des plus intéressantes preuves de l'ancienne extension des glaciers, en ce qu'elles montreraient une même surface du sol ayant été tour à tour mer et glacier. Les autres traces ordinaires du passage des glaciers, c'est-à-dire les stries, &c., sont aussi très frappantes sur les parois des montagnes que l'on est obligé de traverser pour se rendre par exemple à Tchang-kia-keou, l'une des portes de la Grande Muraille.

Si mes conjectures étaient vraies, si les stries profondes que l'on remarque à différentes hauteurs des rochers qui encaissent le Yang-tse-kiang en différents endroits, tels que les passes d'Y-tchang et de Kouei-tcheou, aussi bien que la quantité étonnante de pierres déposées en ligne sur chacune de ses rives, ou de blocs qui occupent le milieu du fleuve de façon à en gêner et à en rendre même la navigation dangereuse par les obstacles et les chutes qu'ils créent; si, dis-je, tous ces indices dénotaient en effet, comme je le crois, le passage d'un glacier, ce serait encore un des plus remarquables témoignages des périodes glaciaires. On y trouverait peut-être, en outre, l'explication de ces immenses ouvertures créées en plusieurs endroits du fleuve actuel à travers des roches de plusieurs lieues d'étendue, taillées presque à pic, sur des hauteurs qui dépassent souvent 120 mètres. On rencontre enfin sur le Yang-tse-kiang, à l'extrémité de quelques vallées de la province de Se-tchuen, de beaux vestiges de moraines terminales.

Une autre sorte de dépôt que l'on ne peut aisément constater en Chine à cause des terres et des cultures qui le recouvre, mais qui existe certainement dans les plaines et notamment dans la plaine de Pékin, c'est ce limon mêlé de graviers et de fragments anguleux auquel on a donné le nom de *drift*, et que les glaces qui le portaient, en se détachant des glaciers pour tomber dans la mer, ont promené et répandu partout où elles finissaient par céder sous son poids. C'est en se basant sur la puissance et la continuité du drift que l'on trouve en Europe et sur les rapports que les glaciers qui l'ont fourni, ont avec les soulèvements du sol que Sir C. Lyell a évalué à deux cent mille ans au moins la durée de la dernière grande oscillation. Il est évident en effet que la puissance et la durée du *drift* sont proportionnelles au temps que sa formation a exigé et qu'elles indiquent ainsi la durée des glaciers qui l'ont charrié; et, pour se rendre compte des motifs que Sir C. Lyell a eu d'en déduire la durée de l'oscillation pendant laquelle ce dépôt s'est effectué, il ne faut que se rappeler comment les glaciers se forment et disparaissent.

Deux choses sont nécessaires pour la formation de la glace; du froid et de l'eau. L'eau fournie à l'atmosphère par l'évaporation des mers et de ses autres réservoirs, se condense sous un abaissement de température; et, si cet abaissement est suffisant, se congèle sous la forme de neige ou de givre. Puis elle retombe et, suivant les couches d'air qu'elle traverse, revient à l'état liquide ou s'accumule sur les sommets et les flancs des montagnes. Mais cela ne

suffit pas pour faire un glacier. Si cette neige ne se modifie pas, le vent la balaiera comme de la poussière. Il faut qu'elle se transforme en névé, c'est-à-dire en une sorte de mortier qui agglutine et retienne ses molécules; et, pour cela, il faut un certain degré de chaleur qui produise l'eau nécessaire. Avec de la glace très froide et par conséquent très sèche, la soudure n'est pas possible. On aurait donc tort de croire que plus le climat sera rigoureux, plus les glaciers acquerront de puissance et de développement.

Pourvu que les hivers soient longs et humides, afin que les réservoirs et les hauteurs se remplissent ou se couvrent de neige, peu importe que le froid soit intense ou modéré; il suffit que le thermomètre se tienne en général au dessous de zéro, et remonte pendant l'été un peu au dessus, pour que la neige ait le temps de s'accumuler, et ne fonde ni ne soit emportée par le vent au fur et à mesure qu'elle tombe. La Nouvelle Zélande avec ses hivers humides, sans être rigoureux, ses étés modérés où un ciel habituellement couvert, éteint et absorbe les rayons solaires, réalise le climat le plus favorable à la formation des glaciers; aussi sont-ils nombreux et étendus dans les montagnes de la plus méridionale des deux îles. Au contraire la chaleur excessive de l'été en Mongolie, chaleur qu'explique très bien le voisinage des sables du Cobi, ne permet pas, malgré le froid aussi excessif de l'hiver, la formation des glaciers. Si donc il en existait autrefois, ainsi que le prouve les moraines dont je parlais tout-à-l'heure, c'est que les conditions où se trouvaient cette contrée n'étaient pas les mêmes qu'aujourd'hui. Les sables du Cobi qui, maintenant exposés aux rayons du soleil, en gardent la chaleur et contribuent tant à l'élévation de la température de l'été, étaient sous l'eau. Le climat était ainsi beaucoup moins chaud; il était aussi, par la même raison, plus humide, de l'humidité qu'il empruntait au voisinage de cette mer intérieure. Mais l'eau n'a pu descendre que parce que le sol s'élevait..... Tels sont les rapports des glaciers et des époques glaciaires avec les oscillations du sol. Nous pouvons ajouter tout de suite que l'altitude de la Mongolie étant beaucoup moins grande alors, le froid y était aussi moins rigoureux; en sorte que le climat de cette contrée devait être très semblable à celui de la Nouvelle Zélande.

On trouve dans les livres chinois de très nombreux et très intéressants souvenirs de ces époques.

L'ancien missionnaire Jésuite français, de Prémare qui vécut en Chine de 1698 à 1735, cite dans ses profondes "*Recherches sur*

les temps antérieurs à ceux dont parle le *Chou-king*," (1) ouvrage que tous ceux qui s'occupent des origines de l'homme devraient relire aujourd'hui, plusieurs auteurs qui en font mention de la façon la plus expresse.

L'on sait ou l'on verra tout-à-l'heure que les Chinois partagent l'histoire du monde en un certain nombre de *Ki* ou de périodes de plusieurs siècles chacune, dont les premières appartiennent aux temps pré-historiques. Le *Chan-hai-king*, livre si ancien qu'on l'attribue à l'empereur *Yu* ou à *Pe-y* qui vivait à la même époque, est précisément une description du monde pendant ces premières périodes; et, au sujet de l'une des plus anciennes, l'on parle d'une montagne du nom de *You-raï* qui veut dire "renfermant tout et en dehors de laquelle il n'y a rien,"* et indique clairement qu'elle seule était exondée. Elle était, selon un commentateur, *Tchin-huen*, située à 12,000 lis, ou 1,200 lieues environ, au Sud-est du lieu où s'élève maintenant le mont *Kouën-lün* ou Kou-kou-nor. L'auteur du *Chou-king* (2) qui n'a aucune idée des changements possibles de la configuration du globe veut que ce soit le mont *Kouën-lün* exondé à son tour.

Mais dans le *Chan-hai-king*, ce n'est que plusieurs *Ki* ou périodes après que le mont *Kouën-lün* devient en effet le centre de la terre.† "Alors l'univers n'était pas encore tempéré comme il l'a été depuis."‡ Dans un autre *Ki*, on parle des eaux qui "n'étaient point encore écoulées et couvraient la terre, de sorte que la misère était extrême,"§ d'où l'on peut conclure qu'elles ne l'avaient pas toujours couverte, puisque les hommes avaient pu se développer et être heureux au point de souffrir d'un changement dans l'état physique du pays qu'ils habitaient. Ce n'est pas le seul du reste dont l'histoire des temps pré-historiques conserve le souvenir. "En ce temps là" est-il dit à propos d'un des *Ki* suivants, "les vents furent grands, les saisons tout-à-fait déréglées"|| et, un peu après, comme une conséquence que la science moderne n'aurait aucune peine à expliquer, "les eaux ne s'écoulèrent point,

(1) V. dans le *Chou-king* trad. par le P. Gaubil, revu et publié par de Guignes en 1760, le Discours préliminaire ou Recherches sur les temps, &c.

* Discours préliminaire ou recherches sur les temps &c. *Chou-king*, traduction Gaubil et de Guignes, page LXV.

(2) Autre livre très ancien dans lequel on trouve beaucoup de traditions.

† Page LXXIV.

‡ Page LXXIII.

§ Page LXXVIII.

|| Page XCVIJ.

les fleuves ne suivaient point leur cours ordinaire, ce qui fit naître quantité de maladies;”* puis “les vents et les pluies redeviennent tempérés et le froid et le chaud arrivent dans leur saison, les hommes se multiplient et parviennent à une extrême vieillesse.” Ensuite, après un certain temps, le côté émergé de la bascule disparaît sous l'eau, “le Ciel tomba vers le Nord-ouest et la terre eût une brèche au Sud-est,”† c'est-à-dire que le Ciel se rapprocha de la terre ou plutôt que la terre s'éleva en se rapprochant du Ciel au Nord-ouest, tandis qu'au Sud-est elle s'affaissa sous l'eau. Puis “les quatre points cardinaux sont rétablis et la paix est rendue au monde.”‡

Enfin se produit un dernier affaissement, le premier des temps historiques, que tout le monde connaît sous le nom de déluge d'Yao.

D'après ce qui précède, il semblerait que les Chinois admettent plusieurs oscillations et c'est en effet ce que nous enseignent la Géologie et les observations faites en Suisse, en Savoie, dans les îles Britanniques et dans le Nord de l'Amérique, où l'on voit, se répétant à différentes profondeurs et recouverts par des couches de terre contenant les fossiles des végétaux et des animaux qui y existaient alors, les faits que la surface actuelle du sol déroule sous nos yeux. Les observations nous démontrent qu'il y a eu certainement deux grandes périodes glaciaires, mais elles n'impliquent point qu'il n'y ait eu qu'un nombre corrélatif de soulèvements. Les glaces n'ont point toujours accompagné les oscillations; quelques unes de ces dernières ont pu s'accomplir sans laisser des traces assez durables pour avoir persisté jusqu'à présent, surtout aux époques excessivement reculées où la cosmogonie Chinoise les fait remonter, c'est-à-dire, à l'époque des San-hoang, sur l'existence ou la nature desquels leurs auteurs ne sont pas d'accord, mais qui, en tout cas, précèdent même les temps de Fou-hi, de Chen-nong, &c. En outre, ces oscillations ont pu être partielles, locales, l'étude des textes eux mêmes éluciderait peut-être ces questions.

III.

L'accroissement de la température de l'été n'est peut-être pas la seule raison directe qui explique la disparition actuelle des glaciers,

* Page XCXVIII & XCXIX.

† Page CIX.

‡ Page CXIJ.

mais quelles qu'en soient les autres causes; qu'on les voie, soit dans le changement de direction des vents si violents qui balaient de nos jours la neige des plateaux de la Mongolie, soit dans l'abaissement de la température de l'hiver, aujourd'hui excessif, comme on le sait en Mongolie, et contraire, nous l'avons vu, à la formation des glaciers, (abaissement dont pourrait rendre compte la disparition d'un courant chaud, émis du gulf Stream, maintenant tout-à-fait rejeté du côté oriental de Formose et du Japon,) on est toujours forcé d'en inférer les changements du sol lui même. Ainsi se prouvent directement et se contrôlent l'un par l'autre, les deux phénomènes de l'oscillation du globe et des grands glaciers d'autrefois.

Dès lors, la supputation de la durée de la dernière oscillation n'est plus qu'une simple question de calcul dont l'observation de ce qui se passe actuellement fournit toutes les bases; et, sans entreprendre la vérification de ceux de Sir Ch. Lyell, lesquels ne sont d'ailleurs jusqu'à présent pas contestés, on voit du moins que rien n'est plus possible ni moins imaginaire que cette supputation dont les résultats, après tout, ne surprendront aucun de ceux qui connaissent les autres données de la Géologie. Une chose plus étonnante, c'est de voir les évaluations, sensiblement les mêmes, auxquelles sont arrivés les auteurs chinois qui ont le plus anciennement écrit. Ici encore, comme au sujet du premier homme, que nous n'avons encore fait qu'effleurer, nous les voyons en effet d'accord avec les conclusions les plus modernes de la science.

Nous les considérons autrefois comme de purs effets d'une imagination fantasque, bien qu'en réfléchissant au nombre et à la valeur des auteurs qui les acceptaient, il semble que nous eussions dû nous garder d'un jugement si dédaigneux. Aujourd'hui nous regretterons qu'il nous ait arrêtés dans la voie des recherches et des observations; et, sans nous laisser détourner par des contradicteurs qui, dans leur ignorance de ce que nous avons appris depuis eux, ne pouvaient y voir ce que nous pouvons légitimement espérer d'y trouver, nous voudrions scruter les textes qui nous livreront peut-être les secrets d'une si remarquable concordance. Qui sait même s'ils ne nous aideront pas à découvrir les lois de ces changements, de ces oscillations qui, sur la terre ferme, déplacent nos ports et les lits de nos fleuves; et dans la mer font surgir des écueils inattendus, et, qu'au point de vue, même le plus pratique par conséquent, il nous importerait tant de connaître et de prévoir.

“Les anciens King, dit le père de Prémare, ne raisonnent point sur la physique du monde,”* mais, ainsi que le père Gaubil le fait remarquer dans une note, c’est des grands King, des King classiques qu’il veut parler; et, en effet, les connaissances que l’on pouvait avoir dans les temps reculés où ils furent écrits, ne permettaient pas d’asseoir cette physique sur des bases assez assurées pour qu’on pût la faire entrer dans l’enseignement public que tous les législateurs et les philosophes de la Chine se sont, au contraire, très visiblement efforcés de rendre aussi positif que possible. Mais il y a d’autres livres, d’autres King, aussi anciens, traitant de choses et de temps moins certains, et qui, s’ils ne sont pas eux mêmes des systèmes, ainsi que le dit le P. de Prémare, ont pu, et avec d’autant plus de raison, puisqu’ils ne sont plus alors que des souvenirs écrits de faits ou de traditions, servir à édifier ceux que les érudits se mirent seulement, d’après le même Jésuite, à bâtir sous la dynastie des Song. On ne doit pas s’étonner,† ajoute le P. de Prémare en parlant de ces systèmes et de leurs auteurs, avec une incrédulité qui ne nous étonnera pas à notre tour, “On ne doit pas s’étonner qu’ils s’égarent, nos anciens Philosophes n’étaient guère plus habiles qu’eux, témoin la Théogonie d’Hésiode, les mondes de Démocrite et les principes de Lucrèce. Ce qu’il y a d’heureux à la Chine, c’est que les mêmes auteurs qui se mêlent de philosopher sur la machine de l’Univers, ont presque tous commenté les King, (les grands Kings,) qu’ils font tous profession de suivre la grande doctrine que ces anciens monuments ont conservée, et qu’ils reconnaissent comme ces King, un souverain Seigneur de toutes choses, auquel ils donnent tous les attributs que nous donnons au Vrai Dieu (1). Je ne m’arrêterai donc pas à expliquer la période de Tchao-kong Tsie, (2) qui

* Discours préliminaire de Chou-king, page LJ.

† Page LJ.

(1) On voit que contrairement à l’opinion émise dans une petite brochure publiée dernièrement à Shang-haï, le P. de Prémare rend hommage à la connaissance que les Chinois ont du Vrai Dieu: il n’est pas le seul de son avis parmi les anciens Jésuites; on peut dire que tous pensaient comme lui, et, pour penser comme eux, il ne faut que lire les King classiques des Chinois. Mais on pourrait lire en particulier sur cette grave question les travaux spéciaux du Père de Prémare et ceux des PP. Bouvet, Amyot, Trigault, Ricci, Gaubil, Cibot, &c., tous empreints d’une science réelle et de l’esprit le plus profond et le plus indépendant.

(2) “Tchao-kang Tsie vivait sous la Dynastie des Song, entre l’an 954 et l’an 1279 de J. C.; il est fameux pour ses nombres. Ses périodes ont été mises au jour par son fils et on les trouve dans le Recueil nommé Sing-li-ta-tsuen.”—Note du P. Gaubil, page LIII.

*comprend une grande année qu'il appelle Yuen et qui est composée de douze parties comme d'autant de mois, qu'il nomme Hoeï, de 10,800 ans chacun; ce qui fait 129,600 ans pour le Yuen entier.** Quand on a voulu prouver par l'exposé de ce système que tous les lettrés chinois sont athées, il me semble qu'il fallait démontrer, que, posé ce système, il n'y a plus de Divinité dans le monde; et de plus que tous les lettrés modernes sont entêtés de cette hypothèse; c'est ce que l'on n'a pas fait."

Quoiqu'il en soit de l'opinion du P. de Prémare sur ces systèmes, aussi bien que de celle des lettrés chinois qui n'en sont pas "entêtés" mais qui sont loin de regarder tous, comme fabuleux ce qui a précédé les commencements des histoires admises pour l'enseignement,† nous en retiendrons avec respect ce qu'elle peut avoir d'encourageant pour nos études et nous continuerons à extraire des "Recherches sur les temps antérieurs du Chou-king" toutes les indications qu'elles pourront nous donner. Nous l'avons dit, et c'est notre plus intime conviction, que ces études n'impliquent avec l'existence de Dieu, aucune contradiction qui les condamnerait par avance à l'absurde et les rendrait inutiles; ce n'est toutefois pas une mince fortune de trouver, signés d'un nom d'une telle autorité, un jugement si conforme à notre pensée et de si précieux renseignements sur des cosmogonies qui, on peut déjà le pressentir, laissent bien loin derrière elles au point de vue, soit de la vraisemblance, soit de l'antiquité à laquelle elles se rapportent, toutes les cosmogonies connues jusqu'à présent.

On peut ranger les historiens chinois en quatre classes: ceux qui se sont bornés à la relation des faits et des dates dont ils pouvaient suivre l'enchaînement authentique; ceux qui ne se sont point laissés arrêter par quelques solutions de continuité dans la chronologie, causées par l'absence de quelques pièces justificatives, et pour qui, certains faits solidement établis, et certaines dates bien fixées ont été suffisants; ceux qui ont voulu concilier des traditions qui leur paraissaient vraies ou vraisemblables, avec des dates qui parussent plus vraies ou plus vraisemblables que celles où les plaçaient les documents d'après lesquels ils travaillaient, et qui les faisaient remonter à des périodes de cent ou de deux cent mille ans, devant lesquelles leur imagination se cabrait; ceux enfin qui, plus indépendants, plus philosophes, ou comprenant mieux les documents des anciens âges, ont eu en vue moins de

* Page L.J.

† Mémoires concernant les chinois, Tome 1, page 86, Tome 2, page 125, &c.

fixer des dates que de proposer des époques et de coordonner les souvenirs des premiers temps du monde. Nous n'avons à nous préoccuper ni des premiers ni des seconds, dont les points de départ ne sont bien certainement que des minimums au delà desquels la société comptait déjà un nombre de siècles considérable, puisqu'entr'autres preuves, il est démontré par le premier chapitre du Chou-king que, déjà du temps de Yao, les chinois connaissaient l'année Julienne de 365 jours et un quart, et celle de 366 jours revenant périodiquement chaque 4 ans. Les troisièmes en cherchant à concilier l'inconciliable, sont tombés dans des erreurs et des défauts analogues à ceux que nous reprochons aujourd'hui aux auteurs de nos propres cosmogonies, religieuses ou autres. Pour nous qui savons que la Création ne mesure point le temps, et que, si nous voulons l'exprimer, les siècles sont les unités dont il faut nous servir, les derniers seuls se rapprochent de la réalité; les derniers seuls nous intéressent; les écarts mêmes de leurs calculs nous disposeront à plus de confiance en leurs recherches et nous feront plus vivement désirer de les suivre avec eux et d'en connaître, s'il se peut, les éléments.

L'état de l'astronomie, lorsqu'ils écrivaient, ne pouvait en effet leur être d'un secours sérieux; et, d'ailleurs, on verra par la suite de cette notice qu'ils ont dû s'aider d'autres circonstances qui n'ont aucune relation avec l'astronomie et qui sont précisément ce que nous cherchons.

Si l'on remonte, dit le P. de Prémare, avec le Vai-ki (1) jusqu'à Pan-kou, que nous savons déjà n'être que l'idée ou le plan idéal de l'homme, "les chinois l'emportent de beaucoup sur les Chaldéens et sur les Egyptiens (2) car, si on en croit le calcul de divers auteurs depuis Pan-kou jusqu'à la mort de Confucius, qui tombe 479 ans avant J. C., il s'est écoulé 2,276,000 ans ou seulement 276,000 ans, ou même 3,276,000 ans, ou enfin, ce qui dit beaucoup plus, 96,961,740 années."*

(1) "Le Vai-ki ou plus exactement le Tong-kien-vai-ki est une histoire ancienne faite par Lieou-jou, aussi nommé Lieou-tao-yuen, qui vivait sous la dynastie des Song et travailla sur l'histoire avec Se-ma-kouang."—Note du P. Gaubil.

(2) On verra plus tard que cette déduction du P. de Prémare n'est pas juste, car les auteurs Chinois qui ont écrit sur ces époques lointaines ne regardent point comme appartenant à une race particulière les personnages de leurs périodes.—G. E. S.

* Discours préliminaire, page LV.

On voit que les auteurs chinois ont du moins appris avant nous que le temps n'était rien en cosmogonie. Cela seul leur mériterait déjà notre estime. Mais nous l'avons déjà dit.

Se-ma-tsien qui, malgré l'opinion du P. de Prémare et de quelques lettrés qui lui reprochent amèrement les éloges exagérés qu'il fut forcé de donner à la dynastie des Han,* peut-être considéré comme le Tite-Live de la Chine,† Se-ma-tsien, qui avait fait, avant d'écrire, de fréquents et longs voyages dans lesquels il s'informait des antiquités de toutes sortes échappées au temps, et avait enfin été nommé Président du Tribunal de l'Histoire Nationale, appuie au moins ces périodes dans son Che-ki‡ ou Histoire Universelle, s'il n'y remonte pas lui même. Tchou-hi (1) qui fit sur l'Y-king des commentaires d'une grande sagacité, exprime nettement son avis: qu'il ne faut pas blâmer ceux qui prétendent aller même jusqu'au delà de Fo-hi et de Chen-nong.§ Tchao-tse après de longues études entreprises par ordre de l'Empereur avec Fou-cheng, sous la dynastie des Hang, sur les restes et les vestiges de l'antiquité et notamment sur les caractères Ko-teou ou Kou-ven|| qui composent la plus ancienne écriture chinoise et qui, sous leur forme de têtards, paraissent avoir de grandes analogies avec les caractères cuneiformes, (2) Tchao-tse dit "que depuis le moment où le ciel et la terre ont été en mouvement, jusqu'à celui où ils finiront, il doit y avoir une révolution entière. Une révolution contient douze périodes et la période 10,800 ans"*** "Depuis la troisième période jusqu'à la septième

* Tome 1, page 131.

† Tome 1, page 82.

‡ Mémoires &c., Tome 8, page 107.

(1) "Tchou-hi est le fameux Tchu-ven-kong, le plus grand des athées chinois si l'on en croit quelques savants: ce que j'en dirai en passant, c'est que j'ai fait voir que ce philosophe n'est pas plus athée que Socrate et Platon et qu'on l'a fait passer pour athée sans aucune preuve."—Note du P. Gaubil.

Tchou-hi a fait sur les Cosmogonies un ouvrage remarquable appelé Kang-mo.

§ Recherches sur les temps &c., page LXIIJ.

|| Mémoires &c., Tome 3, page 309.

(2) Cette circonstance est remarquable à plus d'un titre; on n'ignore pas le secours que prête à la Science la linguistique appliquée à l'analyse des éléments primitifs du langage, ni les résultats, conformes à ceux de la paléontologie, auxquels elle conduit. En outre, si cette analogie était établie, ce serait un nouveau fait en faveur de l'Unité de l'espèce humaine.

** Recherches sur les temps &c., page LXIV.

sous laquelle Yao naquit, il s'est écoulé plus de 45,000 ans et plus de 99,000 depuis le commencement du monde."*

Malgré ses obscurités et une confusion d'idées souvent embarrassantes, on distingue cependant dans le Lou-ché† du très érudit Lo-pi, de la Dynastie des Song, des passages où ces périodes sont aussi adoptées; mais parmi les circonstances avec lesquelles elles se lient dans cet ouvrage ainsi que dans ceux qu'il reste à faire connaître, il en est d'un genre qui n'a été qu'à peine touché jusqu'ici et sur lequel il convient de revenir encore avant de continuer.

IV.

Si l'on ne conteste pas les calculs de Sir C. Lyell, les bases mêmes sur lesquelles il les a établis pourraient être discutées; de ce que les dépôts qui constituent l'écorce la plus superficielle du globe se forment avec une excessive lenteur, il ne suit pas nécessairement qu'aux époques pré-historiques, des révolutions plus multipliées ou plus puissantes n'aient pu accélérer ces accumulations. Toutefois les différents caractères des objets mélangés à ces dépôts, ajoutent tant de force à cette hypothèse que si l'on considère qu'en une telle question, les chiffres ne sont et ne peuvent être qu'un moyen dont l'esprit a besoin pour saisir et embrasser le temps, on reste convaincu qu'ils sont, du moins, fort probables, et l'on arrive même à se demander s'ils ne sont point plutôt, des minimums. Ce qui, dans la plupart des miracles, nous rend si rebelles, ce contre quoi la pensée n'a jamais cessé de protester, c'est, au fond, le faux et timide synchronisme avec lequel on a voulu à toute force, jusqu'ici, qu'ils se soient produits dans toutes leurs circonstances, encore que tout au contraire démontre leur anachronisme. Une fois d'accord sur cette grande question de *temps*, une fois ce point reconnu que le temps n'est rien dans l'œuvre de la création, tout s'explique, car tout devient vrai par rapport à Dieu, normal par rapport à l'homme. Le prodige ne cesse pas, car tout est, dans le monde, et restera éternellement prodige; de l'idée à l'acte, de l'idée à la forme, ou si l'on veut

* Recherches sur les temps &c., page LXV.

Ne serait ce point là l'origine de la légende biblique des sept jours ou sept périodes de la création, avec cette différence que pour les chinois la création n'est point arrêtée et qu'elle doit compter encore cinq journées?

† Mémoires concernant &c., Tome 1, page 101.

Le Lou-ché se trouve à la Bibliothèque Impériale de Paris.

de l'idée de Pan-kou à Pan-kou fait homme, il y aura toujours la distance de l'infini, mais ce faux synchronisme écarté, la transition trouve place dans notre intelligence et ne la révolte plus. Nous parler de nos ancêtres ainsi qu'en parle la Bible, comme s'ils étaient entrés de plain pied dans une condition semblable à celle où se trouvaient les Israélites à leur arrivée en Egypte; passer, comme le livre sacré, sans transition marquée et en quelques pages d'Adam à Noé et de Noé à Abraham; nous dire qu'après avoir fait à Adam et à sa femme des tuniques de peau et les en avoir revêtus, l'Eternel les envoya hors du paradis terrestre cultiver le sol, et nous représenter leurs fils, l'un, comme laboureur, et l'autre, comme pasteur, ce n'est proprement répondre que par des contes naïfs et enfantins aux questions les plus sérieuses et les plus raisonnables. Nous décrire l'état du globe quand nos premiers parents furent placés dans le paradis terrestre; nous montrer les nombreux essais que l'homme dût tenter avant de réussir à cultiver le sol et à élever des bestiaux; nous apprendre quels furent, dans le principe, sa manière de préparer sa nourriture, son mode d'habitation, et joindre à ce tableau les ustensiles, les armes, les engins de chasse ou de pêche dont il se servait, c'est satisfaire dignement à de dignes préoccupations, c'est cesser de traiter l'homme en enfant pour le traiter en homme. La suite de cette notice nous prouvera qu'on le peut à cette heure, et nous montrera que les cosmogonies Chinoises, malgré de nombreuses et très excusables incohérences, ont du moins le grand honneur de l'avoir toujours cru possible.

Les premiers examens des divers étages de l'écorce terrestre ne nous avaient rien appris que de fort vague sur les conditions que notre planète avait successivement traversées; les transformations graduelles qu'elles avaient subies nous avaient échappé; les phénomènes se juxtaposaient sans se relier et ce décousu nous faisait croire à autant de bouleversements, de cataclysmes violents. Déjà cependant ces observations toutes superficielles qu'elles étaient, avaient suffi à reporter notre imagination bien au delà des temps historiques. Sous l'influence de l'idée assez sommaire qu'ils nous faisaient concevoir du temps que ces révolutions, quelque brusques qu'elles eussent été, avaient dû exiger, nous avions été forcés d'allonger les jours de la Genèse et d'en faire de grandes époques successives. Plus tard, une observation plus attentive des dépôts de fossiles placés dans ces étages, nous amena à distinguer de secondes époques et à reconnaître, pour ainsi dire,

dans les jours de la Genèse des heures ou plutôt d'autres temps dont nous ne pouvons fixer ni les limites ni la durée, mais parfaitement établis. C'est ainsi, par exemple, qu'après celui des végétaux, le jour de la création des animaux dut être divisé en différents âges que l'on nomma suivant la prédominance des espèces dont on retrouvait les ossements : âge de l'ours des cavernes, âge du tigre, de l'aurochs, de l'élan, du renne, &c. Mais voici maintenant que les heures se fractionnent à leur tour et leurs parties se multiplient et s'allongent dans des proportions inattendues. C'est, ainsi qu'on l'a déjà vu, ce qui a lieu depuis une dizaine d'années surtout, pour l'heure où l'homme fit son apparition sur le globe. Non seulement elle a commencé beaucoup plutôt ou beaucoup plus loin qu'on ne le pensait; mais elle se manifeste par degrés, par progressions, et chacune de ces progressions est elle même une longue époque. Voilà ce que nous apprend l'étude plus circonstanciée des dernières couches, de celles qui précèdent immédiatement les terrains actuels. Nous croyions que l'homme ne s'était montré pour la première fois qu'avec le renne, et nous retrouvons ses traces jusque dans les dépôts de l'âge de l'ours, du tigre, &c., et ces traces sont si évidentes, si caractéristiques, si abondantes et se trouvent si généralement distribuées que ce sont elles qui, par les traits distinctifs qu'elles présentent, selon les étages où elles existent, servent maintenant à classer ces époques (1). Ainsi la contemporanéité de l'homme avec les animaux que l'on croyait déjà disparus du monde au moment où il se montra, résulte d'une manière frappante et aujourd'hui absolument incontestée, des instruments et

(1) Les Chinois semblent avoir eu l'idée d'établir aussi leurs époques sur les caractères tirés du règne animal; mais, est-ce par les mêmes motifs que nous? c'est ce que l'on ne sait pas et ce qu'il serait intéressant de rechercher. Seulement, au lieu d'interrompre, comme nous venons de le faire, leurs séries animales et de les arrêter à l'apparition de l'homme, ils les continuent, ne regardant l'homme que comme une des évolutions de la création et non comme la fin de ces évolutions. Hou-chi et Tchao-tsé disent que "le ciel commença ses opérations à la révolution du Rat, la Terre à la révolution du Bœuf, et que l'homme fût produit à la révolution du Tigre. L'Homme fait aussi ses opérations," Yao c'est-à-dire l'homme achevé, "naquit à la révolution du Cheval: la Septième. À la Onzième le chien fera les siennes, et après avoir passé par tous les degrés dont elles sont capables, elles cesseront d'être et le Ciel, devenu sans force ne produira plus rien jusqu'à la Douzième période où la terre et tout ce qui l'environne se détruiront aussi, et tout l'Univers rentrera dans le chaos. Ce chaos sera une période entière à se débrouiller &c."—Recherches sur les temps &c., page LXIV.

des ossements humains que, depuis 1841, où M. Boucher de Perthes eut l'honneur d'inaugurer ces découvertes, l'on ne cesse de trouver, on peut dire, dans toutes les parties du monde, mélangés dans les sables ou incrustés dans les brèches, et autres roches de diverses natures, avec les débris de ces mêmes animaux (1). Ces instruments consistent en haches, maillets, couteaux, flèches et autres outils plus petits en pierres taillées; en bois de cerf, os, dents, lames d'ivoire, cornes et coquillages façonnés dont les plus précieux, et les mieux conservés furent extraits des cavernes, en même temps que des ossements et même des crânes d'hommes. Certains ossements d'animaux portent l'empreinte des instruments qui ont servi à les casser et à en détacher les chairs, d'autres sont encore traversés par ceux à l'aide desquels l'animal a été frappé.

(1) Il ne serait peut-être pas, d'après certains faits qu'on relève dans les livres chinois, aussi sûr qu'on le dit, que ces anciens animaux eussent tout-à-fait disparu. Les descriptions qu'ils donnent de quelques espèces dont ils parlent comme si elles existaient encore, et qui ne s'appliquent guère à celles que nous connaissons sur nos continents, provoquent un rapprochement involontaire avec les espèces réputées éteintes.

Parmi les *Observations de physique de l'Empereur Kang-hi* dont les mémoires des anciens Jésuites donnent quelques traductions, on lit que "l'on trouve sur la côte de la mer du Nord où le froid est intense et presque continuel, un animal nommé Fen-chou, dont la figure ressemble à celle du rat, mais qui est gros comme un éléphant: il habite les cavernes obscures et fuit sans cesse la lumière. On en tire un ivoire qui est aussi blanc que celui de l'éléphant, mais plus aisé à travailler et qui ne se fend pas. L'ancien livre Chin-y-king, parle de cet animal en ces termes: il y a dans le fond du Nord, parmi les neiges et la glace qui couvrent ce pays, un *chou* (rat) qui pèse jusqu'à mille livres; sa chair est très bonne pour ceux qui sont échauffés. Le *Tsée-chou* le nomme Fen-chou; et parle d'une autre espèce qui n'est pas si grande: il n'est grand, dit-il, que comme un Bufile, s'enterre comme les taupes, fuit la lumière, et reste toujours dans les souterrains. On dit qu'il mourrait s'il voyait la lumière du soleil ou même celle de la lune."—Mémoires concernant les Chinois, Tome IV, page 481.

"Le Kan-ta-han est une espèce de cerf du pays de Fou-yo-eulh-tsi; sa couleur est d'un noir qui tire sur le bleu foncé; il a au dessus du col une espèce de fanon de chair fort gros et sur l'échine une bosse comme le chameau. Cet animal est très gros et plus pesant qu'un bœuf; ses cornes sont assez grosses, recourbées et d'une substance qui ressemble à celle des os; elles ont plus de force et de dureté que le meilleur ivoire, &c."—Mêmes observations et même volume, page 459.

"Le Renard volant se trouve dans les épaisses forêts de la Tartarie, au Nord de la Grande Muraille; les ailes ne sont que des peaux légères qui vont d'un pied à l'autre et se terminent à la queue. Cet animal ne vole qu'en s'élançant du haut d'un arbre sur un autre qui est plus bas; mais il ne peut pas voler en montant: les anciens ont connu ce renard singulier, puis qu'ils

Dès à présent donc se dégage une partie de l'histoire primitive de nos ancêtres; pas d'animaux domestiques, pas de métaux, pas d'instruments propres à cultiver le sol; la chasse et la pêche étaient leurs seules ressources; en fait d'habitations, les cavernes dont ils disputaient la possession aux bêtes fauves. Encore les avaient-ils toujours habitées? avaient-ils toujours su s'y réfugier? Faibles au début, peu nombreux, ainsi qu'on peut en juger par le petit nombre et la grossièreté extrême des vestiges qu'on en recueille dans les couches les plus anciennes de l'époque quaternaire, à laquelle tout ceci se rapporte, ils se glissaient silencieusement à travers cette nature que pourtant ils devaient dompter. Mais peut-être étaient-ils déjà bien éloignés de leur première origine. N'a-t-on pas trouvé dans le calcaire de la Beauce, c'est-à-dire en plein miocène, des silex travaillés et une mâchoire de rhinocéros, portant une entaille visible, ce qui le reporterait en effet aux derniers temps de l'époque tertiaire.

À en croire les traditions chinoises, cela ne serait point douteux.

Mais avant de continuer à les interroger, voyons d'abord ce que la science européenne doit à ses propres recherches.

Si l'on compare, dit Mr. A. Maury, dans le tableau qu'il fait de l'homme primitif et que je lui emprunte, "si l'on compare les divers objets en pierre et en os taillés, fournis par les couches quaternaires, les cavernes et les plus anciennes sépultures, on est frappé des différents modes de travail qu'ils représentent. Les uns sont façonnés de la manière la plus grossière et ne présentent que les premiers rudiments de la fabrication, d'autres témoignent d'un art moins inhabile, enfin il en est où se révèlent une adresse et une dextérité singulières. Ces progrès palpables de l'industrie primitive permettent de classer ces dépôts selon une échelle de

lui ont donné un nom qui l'a caractérisé distinctement. L'auteur du Niu-ching-chi, dit qu'il y a un renard qui se nourrit de glands et de pignons, puis s'envole dans les Hiên-gin (Demi-dieux du Tao-sée). Cette fable ridicule a été imaginée pour persuader un fait qu'on trouvait dans les anciens, et qu'on voyait, par ignorance, dans le faux jour d'un merveilleux outré. Il y a à Kiéou-ouai une espèce de rat volant, il est un peu plus gros que les rats ordinaires et a les ailes comme le renard dont nous venons de parler."—Même volume, page 455.

Quels peuvent être ces animaux? Qui sait si on ne les retrouvera pas un jour, retirés, comme en un dernier refuge, dans quelque île inconnue de la mer libre du pôle Nord? Ainsi s'expliqueraient les mammoths en chair et en os que nous charrient de temps à autre les glaces du Nord. On sait qu'une espèce de grand tigre, plus grand que celui de l'Inde, à longs poils, existe encore dans les forêts de la Tartarie.—G. E. S.

civilisation relative, car un dépôt ne renferme presque jamais à la fois des armes et des engins appartenant à ces diverses catégories. Ce qu'on pourrait appeler un style déterminé caractérise chaque trouvaille.

“La physionomie de la faune apporte un second élément chronologique. Les animaux dont les ossements sont associés aux traces de l'homme n'ont pas fait tous en même temps leur apparition. L'*Ursus-Spelæus* qui paraît avoir précédé chez nous l'*hyène* et le grand *felis* des cavernes firent graduellement place aux grands mammifères septentrionaux, à l'*éléphas primigenius*, au *rhinocéros tichorinus*, au renne alors que la température alla s'abaissant. Le renne survécut à ces énormes pachydermes et laissa après lui l'aurochs, qui s'éteignit à son tour pour ne plus laisser sur notre sol que les espèces que nous y observons encore. Les transformations du règne animal peuvent donc servir de points de repère dans cette nuit profonde de la période antéhistorique. C'est par l'emploi simultané de ces deux éléments chronologiques qu'il est possible de classer suivant la succession des temps les vestiges des premiers humains.”

Dans les dépôts les plus profonds de l'époque glaciaire, dans les dépôts lacustres, dans les sables et les graviers fluviaux du Suffolk et de diverses localités du Bedfordshire, dans les transports sableux et caillouteux de la Somme et de l'Oise, et dans les sablières du Champ de Mars à Paris, on trouve des ossements de l'hippopotame, du grand castor, du renne, du bœuf musqué qui aujourd'hui n'habitent plus que des contrées beaucoup plus septentrionales. Associés à leurs débris, on trouve des silex et des objets en pierre dénotant le travail le plus grossier et l'état social le plus rudimentaire.

Les cavernes des Pyrénées situées à 150 et 250 mètres au dessus du niveau des vallées actuelles, dans lesquelles existent les mêmes débris, se rattachent au même temps.

“Les armes et les ustensiles de cette première époque sont des haches lancéolées, taillées à grands éclats. On reconnaît aisément que ces silex dont la patine blanchâtre dénote l'excessive antiquité, furent destinés à trancher, à fendre et à percer. Quand les pointes sont aigües, elles ont été obtenues par des cassures à plus petits éclats; quelques unes de ces pierres figurent de véritables grattoirs.

“Le second âge s'annonce par un travail plus intelligent de la pierre; mais les caractères zoologiques ne sont pas assez tranchés pour le distinguer du premier. Les débris appartenant à cette

époque se trouvent surtout dans les cavernes, et entr'autres, dans celles des Pyrénées qui sont creusées au pied des montagnes. Pendant cet âge, les carnassiers paraissent avoir été moins répandus, ce qui explique la multiplication des ruminants. Les grands pachydermes vivent encore; le renne abonde dans le midi de la France, à en juger d'après les ossements qu'on a rencontré non seulement dans les brèches et dépôts des cavernes du Périgord et de l'Angoumois, mais aussi au pied de certains grands escarpements de calcaires crétacés où ils sont mélangés avec de nombreux silex taillés.

“L'homme de cette époque emploie à la fois, les os, les cornes et la pierre qu'il façonne avec plus d'adresse. Les flèches sont barbelées, des silex sont taillés en scies, on rencontre des ornements exécutés avec des dents, des cailloux; on a extrait de plusieurs cavernes et notamment de celle des Eyzies des sifflets faits avec des phalanges de ruminants creusées et percées d'un trou. Enfin on a trouvé des ivoires et des bois de renne fouillés et ciselés et même des schistes, des ivoires et des cornes sur lesquels sont dessinés avec la pointe d'un silex l'image des animaux d'alors. Le plus surprenant parmi ces dessins ou *graffiti* est celui qui a été découvert en 1865 dans la grotte de la Madeleine près de Sarlat et qui représente, sur une lame d'ivoire, l'image du mammoth avec sa longue crinière. Mais l'homme n'a pas seulement reproduit l'image des animaux, il a aussi essayé de dessiner la sienne propre, ainsi que le prouve un outil cylindrique retiré des cavernes du Périgord et dont les deux faces sont décorées de deux têtes d'aurochs et d'une figure humaine. Cependant les grands carnassiers coexistaient encore avec lui. Non seulement il était déjà sorti de l'état le plus sauvage, mais il semble résulter de l'attitude repliée de quelques squelettes trouvés dans les grottes d'Aurignac, attitude identique à celle qu'on a observée dans les anciennes sépultures de la France, de la Suisse, de la Suède, de l'Algérie et du Pérou, que l'homme avait déjà l'habitude de certains rites funéraires. Des grottes de ce second âge ont été découvertes dans le Liban, à Natchez, dans le comté de Gasconade (Kentucky) à Big-bone-lick (Missouri) &c., et ont fourni les mêmes débris. On y a même découvert des ossements humains.

“Le troisième âge est marqué par l'apparition de la pierre polie, car jusqu'à présent aucun spécimen ne portait de traces de polissage. Ces instruments en silex, en serpentine, en néphrite,

en obsidienne, ce ne sont plus les anciens dépôts ni les cavernes qui les fournissent, mais on les trouve dans des couches plus récentes et plus superficielles, telles que les tourbières, dans des sépultures d'une excessive antiquité comme celles que recouvrent les dolmens, dans les anciens camps retranchés de César, de Furfooz, d'Hastedon, de Poilvache, &c. Ce sont ces instruments trouvés par milliers auxquels les antiquaires ont donné le nom de *Celts*.

"Une grande quantité est faite en pierres de plusieurs espèces fort différentes de celles qui existent dans les localités voisines, ce qui implique la nécessité d'échange et de trafic. Quelques unes même ont dû être apportées par mer. Les grands animaux pachydermes ou carnassiers n'existent plus, mais on rencontre le cheval, le loup, le chien, le mouton et la chèvre, &c. Le renne ne se montre plus; en revanche on y trouve les animaux domestiques qui font complètement défaut dans les cavernes du Périgord. Evidemment le climat était alors devenu ce qu'il est de nos jours, on était au seuil de la période historique."

Ces observations s'appliquent également aux débris d'animaux qu'on déterre avec ceux de l'homme sous les dolmens et sous les allées couvertes qui existent en France et en Angleterre et qu'on prit pendant si long temps pour des autels et des édifices druidiques. Les objets déposés sous ces dolmens et allées couvertes sont aussi des silex et, pour la première fois, des poteries grossières.

"De quelques unes de ces sépultures, mais seulement de quelques unes, on a extrait des armes et des outils en bronze et il en existe où la pierre est presque complètement remplacée par ce métal; mais alors on remarque que l'architecture funéraire a, par suite de l'emploi de outils en métal, pris de nouveaux développements; l'intérieur des tombeaux, au lieu de se borner à une simple cavité, se divise en galeries et en chambres souterraines."

La présence simultanée de la pierre et du bronze peut caractériser une époque de transition; la coexistence des deux matières prouve que les dolmens et les allées couvertes s'élevèrent durant une période qui s'est liée immédiatement à celle que distingue la préparation des métaux. Les monuments mégalithiques ne se rencontrent pas seulement dans les contrées qu'ont habitées les Celtes. On en a observé en Syrie, en Afrique, dans l'Hindoustan, et il y a peut-être lieu de penser qu'en Chine où ce genre d'architecture s'est conservé jusqu'à présent pour les tombeaux et les portiques que l'on appelle Pei-li ou Pei-fang, des recherches amèneraient des découvertes intéressantes. A cet âge se rat-

tachent encore les amas de coquilles qui existent sur les côtes du Danemarck et auxquels on a donné le nom de Kjoekkenmoeddings (ou rebuts de cuisine) et enfin les cités lucustres ou *palaffites* que l'on découvre au fond des lacs de la Savoie, de l'Italie, de l'Irlande et d'où l'on ramène des ossements d'animaux identiques à ceux qui vivent aujourd'hui, des métaux et des poteries semblables à ceux des dolmens.

“On le voit par ce qui précède, il est dès lors possible d'établir d'une manière approximative une chronologie des dépôts qui se rapportent à l'âge de la pierre et de l'époque quaternaire. Mais il ne faut pas oublier les débris, malheureusement trop peu nombreux pour qu'on puisse en suivre l'enchaînement, trouvés dans les dernières couches du terrain miocène, c'est-à-dire dans les derniers temps de l'époque tertiaire et qui force à reporter l'existence de l'homme à une date encore plus reculée.

“Quant aux débris authentiques que l'on retrouve de l'homme à ces différentes époques, aucun de ceux, d'ailleurs très rares, du premier âge de l'époque quaternaire ne nous permet d'avancer rien de sérieux sur cette race. Les hommes des temps qui suivirent sont mieux connus. C'est à celui qui succède aux graviers de la Somme que l'on rapporte les crânes d'Engis et de Néanderthal dont on a déjà vu les principaux caractères. Les crânes de l'âge suivant présentent une capacité plus considérable, les parois en sont plus minces, mais le front est bas et fuyant, les arcades sourcilières en sont avancées, la racine du nez est écrasée, la face est courte, le menton manque de saillie. Les autres ossements indiquent un squelette grand et développé, mais ce n'est que dans les crânes trouvés sous les dolmens et au commencement du quatrième âge de l'époque quaternaire, de l'âge des métaux, qu'on reconnaît dans les caractères qu'ils présentent un progrès vers la beauté telle que nous la concevons.

“Tels sont les éléments qui dès aujourd'hui peuvent nous servir de jalons pour la nouvelle histoire primitive de l'homme qu'il sera peut-être donné à l'avenir de reconstruire. Après avoir traversé une longue série de modifications et de progrès dont nous ne nous rendons pas encore compte, les hommes, du moins ceux de l'Europe, ont d'abord taillé la pierre pour s'armer, puis ils l'ont adaptée à certains usages, ils ont façonné les ossements des animaux, et, s'habillant de leur peau, ils ont long temps vécu dans des cavernes, chasseurs comme toutes les races primitives; enfin, quelle que soit la véritable cause de ce changement, ils ont quitté les antres

pour les cabanes, ils ont connu l'agriculture, les plantes textiles et alimentaires, possédé des animaux domestiques et fondé des sociétés. Ils ont alors poli la pierre et donné naissance à un peuple puissant dont les dolmens furent les monuments funèbres. Ils ont connu l'or, le bronze et une sorte d'opulence grossière.

“On est donc ainsi amené à constater pour l'homme la loi nécessaire du progrès, la loi de la perfectibilité; elle est inscrite sur chaque échelon que l'humanité gravit dans sa marche; et cependant les faits que nous venons de retracer ne nous font qu'à peine entrevoir les divers degrés qu'elle a du traverser, l'état antérieur et originaire nous échappe entièrement; obscur et faible comme tout ce qui commence, il n'a pour témoins que des acteurs peu nombreux et qui ont entièrement disparu de la scène. À la distance où nous sommes des points de départ, il se trouve que la plupart des jalons intermédiaires ont été enlevés.”

Voyons maintenant si les traditions de la Chine et les vestiges qu'elle a pu conserver pourraient nous en faire retrouver quelques uns.

V.

Bien qu'en tout ce qu'elles disent de cette première aube de l'humanité, règne une assez grande confusion, l'on distingue pourtant dans ces traditions, trois grandes époques entre l'incorporel Pan-kou et Chen-nong à la face bestiale. Les deux premières sous les titres de Tien-hoang et de Ti-hoang, comprendraient suivant les uns, pour la première, celle des Tien-hoang, treize rois ou chefs de races, nommés Vang, c'est-à-dire *espérance** ayant vécu chacun 18,000 ans; suivant les autres, un seul chef ayant vécu 18,000 ans; et pour la seconde, celle des Ti-hoang, onze chefs de race ou un seul ayant aussi vécu 18,000 ans chacun. Et ce sont bien de véritables années qu'il s'agit, car pour désigner ce qu'aujourd'hui on appelle un an, on disait un *changement de feuilles*, comme on le dit encore dans les petites îles de Lieou-kieou.†

La troisième période ou époque est celle des Gin-hoang, qui comprend neuf chefs qui ont duré 45,600 ans, et à qui on attribue des faits qui impliquent contradiction avec ceux des époques suivantes, mais au milieu des quels on pourrait deviner que c'est

* Recherches sur les temps, &c., page LXVJ.

† Page LXVIJ, lire d'ailleurs à propos de ces traditions les pages LIJ à LXVIJ.

alors que l'homme eût pour la première fois conscience de lui même et le sentiment, non pas encore du bien et du mal, mais seulement de ses actes.

“On lit dans le Yuen-lao-fan que ce fût sous les Gin-hoang que commença le bon gouvernement; alors le Seigneur ne fût plus un vain Roi, le sujet ne fût plus comblé d'honneurs sans raison; il y eût de la distinction entre le souverain et le vassal, on bût et on mangea, et les deux sexes s'unirent.”*

C'est alors que Fo-hi est nommé pour la première fois; je dis pour la première fois, parcequ'en effet plusieurs auteurs le font reparaitre dans plusieurs des périodes suivantes et qu'on ne le fait régner comme chef de race que sept ou huit périodes plus tard, bien que ces mêmes auteurs prennent soin d'avertir du vague où ils sont eux mêmes, en disant qu'il ne faut point placer telle ou telle période après Fo-hi. La lecture des textes, la connaissance des documents d'après lesquels ils travaillaient et des faits que nous devons à nos propres observations, permettraient peut-être d'établir quelque clarté dans ces traditions où ils sont les premiers embarrassés. Fo-hi ne serait-il, suivant en ceci une idée qui plait tant aux Chinois et qui leur est si habituelle, qu'une allégorie destinée à représenter l'humanité en ses débuts informes, comme le têtard représente l'être à l'état embryonnaire? Cela paraît probable, sans détruire aucune des conséquences que je suggérais à ce propos dans les premières pages de ce travail. D'où est venue aux Chinois, à l'époque surtout où ils imaginèrent cette allégorie, la connaissance du fait physiologique, qui nous a été divulgué depuis si peu de temps?

Quoiqu'il en soit, arrivés à cette époque, nous ne sommes point encore, d'après les Chinois, à l'âge des silex et de la chasse. Jusque là comment l'homme a-t-il vécu? de fruits et d'herbes crues seulement? Toutes ces époques ne seraient-elles encore que des allégories? Mais alors après un tel prodige de pressentiment physiologique, quelle merveille de connaissance psychologique!

Continuons toutefois nos explorations dans le domaine des cosmogonies chinoises et tâchons d'y reconnaître nos âges de silex que l'on serait maintenant presque tentés d'appeler modernes.

Après Gin-hoang commencent cinq petites époques ayant eu chacune plusieurs familles ou plusieurs chefs de races, auxquelles toutes ensemble, et y compris même celle des Gin-hoang, on donne

* Page LXX.

90,000 ans selon Lo-pi,* plus d'un million d'années, suivant un autre auteur qui, il est vrai, paraît être seul de son avis et ne pas l'appuyer sur des conjectures de beaucoup de valeur. C'est sous la troisième de ces petites époques, nommée Ho-lo, et qui n'eût que trois familles, "que les hommes apprirent à se retirer dans le creux des rochers."†

La septième période, nommée Sun-feï, comprend vingt deux familles qui durèrent un temps indéterminé. Certains auteurs veulent qu'elle n'ait pas eu plus de 1,800 ans; d'autres, et les plus anciens, disent positivement, au contraire, d'une seule de ces familles, qu'elle durât quinze cents ans; ils attribuent à une autre trois cents quarante ans d'existence, et à une troisième trois cents. Il paraît du reste que ces familles n'auraient pas réellement existé et ne seraient que des symboles sous lesquels les plus anciens cosmogonistes auraient rangé une suite de faits. Ils ne parlent jamais de leurs chefs que d'une façon hyperbolique, mais assez transparente pour que l'on puisse en retenir quelques indications intéressantes. Ainsi l'on dit de Kiu-ling, premier roi de la première de ces familles "qu'il agit sans cesse, qu'il précede le repos et le mouvement, qu'il retourne les montagnes et détourne les fleuves et qu'il n'était pas toujours dans le même lieu, mais qu'il y a beaucoup de ses traces dans le royaume de Chou."‡

Le royaume de Chou correspond à la province actuelle du Se-tchuen § la plus occidentale de la Chine, une des plus rapprochées du Kouén-lün et des autres montagnes du Thibet. Nous avons pu y constater en effet, en 1863, les traces des profondes et nombreuses modifications dont elle a été le théâtre, regrettant de ne pouvoir consacrer à leur étude le temps et l'attention nécessaires.

Ce ne fût que sous la vingt deuxième famille de cette période que l'on cessa d'habiter les cavernes.||

Après ces petites époques se placent deux périodes comptant la première treize, la seconde quinze ou seize familles. Sous la première famille de la première de ces deux périodes, "*Tchin-sang*, apprit aux hommes à préparer les peaux et à en ôter le poil avec des rouleaux de bois pour s'en servir contre les frimats et les vents

* Page LXXIJ.

† Page LXXVIJ.

‡ Page LXXIJ.

§ Page LXXIX.

|| Page LXXVIJ.

qui les incommodaient.”* Sous la quatrième famille, “les Rois allaient les cheveux épars sans sceptre et sans couronne; les peuples, sans les reconnaître pour maîtres, gardaient au fond du cœur leur vertu; alors le Ciel et la Terre gardaient un ordre charmant et toutes choses croissaient sans relâche; les oiseaux faisaient leurs nids si bas qu’on pouvait les prendre avec la main, et tous les animaux se laissaient conduire à la volonté de l’homme; on tenait le milieu et la concorde régnait partout; on ne comptait point l’année par les jours; il n’y avait ni dedans ni dehors, ni de mien ni de tien. C’est ainsi que gouvernait Houën-tün; mais quand on eût dégénéré de cet heureux état, les oiseaux et les bêtes, les vers et les serpents tous ensemble, comme de concert firent la guerre à l’homme.”†

La onzième famille compte plus de cent générations pendant l’espace de douze ou de dix-huit mille ans. Alors on était déjà “devenu trop éclairé, ce qui fût cause que les animaux se révoltèrent; armés d’ongles, de dents, de cornes et de venin, ils attaquaient les hommes qui ne pouvaient leur résister; alors Yeou-tsao régna, et ayant le premier fait des maisons de bois en forme de nids d’oiseaux, il porta le peuple à s’y retirer pour éviter d’être dévoré des bêtes féroces; on ne savait point encore labourer la terre, on vivait d’herbes et de fruits, on buvait le sang des animaux, on dévorait leur chair toute crue et on avalait le poil et les plumes.”‡

Sous la douzième famille on découvre le feu et on apprend à cuire les viandes; § on apprit aussi à pêcher. || Souï-gin,** sous le règne duquel cela se passait, reconnaît aussi les quatre points cardinaux, impose pour la première fois des noms aux plantes et aux animaux de telle sorte que leurs noms suffisaient à les faire reconnaître. Enfin il trouve les premiers caractères d’écriture, il découvre les poids et les mesures et fixe l’âge du mariage. Mais ces dernières innovations seront attribuées par la suite à d’autres chefs de races. Il serait plus juste et plus clair de dire que c’est sous ce règne que l’on commença à les soupçonner.

* Page LXXVIIJ.

† Page LXXX.

‡ Page LXXXIJ.

§ Page LXXXIIJ.

|| Page LXXXIIJ.

** On raconte que pendant le règne de Souï-gin, un sage étant allé se promener au delà des bornes du Soleil et de la Lune, (ou en haut d’une montagne), vit un arbre sur lequel était un oiseau, qui en le becquetant fit sortir du feu. Il en fût frappé, et en prit une branche pour en tirer du feu.

Sous la treizième famille, "ce qui tenait lieu d'écriture, c'était des cordes remplies de nœuds."*

Je disais tout-à-l'heure que Fo-hi reparaissait en différentes périodes. En voici une, la neuvième des petites, composée de quinze Rois dont le Vai-ki et le Tsien-pun font quinze ministres, sous Fo-hi qu'il ne nomme pas autrement, comme s'il n'était qu'un Symbole sous lequel eussent régné ces quinze Rois.

Le premier de ces Rois est Se-hoang ou Tsang-kie. "Ce prince savait former des lettres au moment où il naquit. Une tortue divine portant sur son dos des lettres bleues, les lui donna; ce fût alors que, pénétrant tous les changements du Ciel et de la Terre, en haut il observa les diverses configurations des étoiles; en bas il examina toutes les traces qu'il avait vues sur la Tortue; il considéra le plumage des oiseaux, il prit garde aux montagnes et aux fleuves qui en sortent; et enfin de tout cela il composa les lettres. Les plus habiles Chinois prétendent que c'est l'ancienne écriture nommée Koteou-chou et disent qu'elle subsista jusqu'au Roi Siuen-vang, c'est-à-dire jusqu'à l'an 827 avant l'ère chrétienne. Mais Kong-ing-ta a très bien remarqué que, quoique la figure des lettres ait plusieurs fois changé, les six règles sur lesquelles Tsang-kie les forma n'ont jamais souffert aucun changement, &c." † (1)

L'on a vu sous les règnes précédents la conscience s'éveiller, le sentiment des actions naître, et le premier sentiment qu'il engendre est, naturellement, celui de la différence entre les rapports du père et du fils qui s'établit sous Tchang-kié. Voici maintenant quelque chose de plus; on ne dit pas encore, et on ne le dira que plus tard d'une façon positive, que l'homme ait conscience de ce qui était bien et de ce qui était mal, mais sous Tsang-kié paraissent

* Page LXXXIV.

† Page LXXXVIJ.

(1) Ce sont ces lettres qui forment le vieux texte du Hiao-king. On appelle ce texte Kou-ouen. Ce sont proprement des lettres vermiculaires mélangées de signes ayant la forme de têtards. Voir les planches III à VIII dans le Tome I des Mémoires des anciens Jésuites.

"Ces caractères sont déjà modifiés. Il y a en trois sortes de caractères Kou-ouen: le Tchang-kou-ouen dont il ne reste que les King et quelques inscriptions, le Tchong-kou-ouen et le Hia-kou-ouen. Le premier, le Tchangkouen-ouen, est du Chinois tout pur suivant les missionnaires, laconique, plein d'images, d'une profondeur, d'un vrai, d'un lumineux, d'un bon sens et d'une probité qui enchantent. Les pensées y sont serrées les unes contre les autres et comme *pillées*, &c."—Mémoires des anciens Jésuites, Tome VIII, page 157.

les premières lois,* qui, effectivement, ont très bien pu être fondées sur les besoins et les intérêts d'une société naissante plutôt que dictées par le sentiment moral; et, ce qui donne quelque valeur à cette interprétation, c'est qu'après avoir dit que les lois parurent, on ajoute tout de suite que les châtimens fûrent en vigueur. Cependant les Rites et la Musique régnaient aussi.

L'Écriture est aussi inventée, mais même sous Tchong-yang, le troisième chef de cette époque, on se servait encore des cordes à nœuds, parceque les lettres n'étaient pas encore parvenues jusqu'à l'usage commun. C'est de ce chef que date le premier souvenir religieux. Jusqu'à présent les rapports de l'homme avec Dieu n'ont été que des rapports de sujétion, consciente ou inconsciente. Maintenant il en fait l'Objet d'un culte, et, pour la première fois il Lui dresse un autel. Lo-pi, qui comprend toute l'importance de ce fait, en parle fort au long dans son Lou-che.† Toutefois on ne sent pas encore le besoin d'en rendre les démonstrations fréquentes et générales. Une seule à l'avènement de chaque famille régnante suffit. Rien non plus n'indique que ce culte fût fondé sur un sentiment bien parfait de la Divinité. Remarquons d'ailleurs qu'il est postérieur à celui de la famille. Dès cette époque aussi, il semble qu'on ait déjà soupçonné cet aphorisme qui ne devait se formuler que beaucoup plus tard et que beaucoup plus tard encore les Latins ont traduit par "*Mundum regunt numeri*." On attribue en effet à ce Tchong-yang, entre les nombres et l'homme, un rapprochement remarquable pour lequel je renverrai à Lo-pi qui le rapporte.‡

On ne parle pas encore de l'agriculture. Celui qui doit la personnifier ne naîtra que plus tard, mais il est probable qu'on en connaît au moins les opérations essentielles: en tous cas, on connaît le blé.§ C'est du même aussi qu'on fera dater l'usage de la pierre, mais on verra, quand son époque sera venue que l'agriculture et l'emploi de la pierre constituaient des arts, et même des arts très avancés et rendus vulgaires. Quoiqu'il en soit, dès à présent l'on a plus de motifs qu'il n'est nécessaire, pour être certain que la pierre entraît dans l'outillage de l'homme. Eût-il dû ne s'en servir qu'en la fixant sous forme d'écaïlle ou de massue au bout d'un bâton, elle lui fût indispensable dans la lutte que

* Page LXXXVIJ.

† Page LXXXVIIJ.

‡ Page LXXXVIIIJ.

§ Page LXXXVIJ.

nous avons vu les animaux lui livrer il y a déjà plusieurs chefs, je veux dire plusieurs périodes.

Après Tchong-yang viennent trois Empereurs ou Chefs de Races dont les règnes offrent quelques particularités assez remarquables. Ainsi l'on dit que "sous le règne du premier de ces Empereurs, le ciel donna la douce rosée, la terre fit sortir de son sein des sources de nectar; que le soleil, la lune et les étoiles augmentèrent leurs clartés et que les planètes ne s'écartèrent point de leur route."* Or il est bien évident que ce nectar n'était que de l'eau pure, ainsi que le fait remarquer le Père Gaubil, qui, en traduisant ainsi le mot chinois Huen-tsiou, rappelle ce vers d'Ovide:

"Nectar erat manibus hausta duabus aqua."

Mais si l'on parlait de l'eau pure en ces termes, c'est qu'évidemment aussi, sa rareté la rendait précieuse; c'est que les eaux de la mer ne s'étaient point encore retirées, ou plutôt que la terre ne s'était point encore assez élevée hors de la mer pour que les sources qu'elle renferme ne fussent pas saumâtres. Les faits relatifs au soleil et aux étoiles seraient peut-être plus difficiles à comprendre.

Sous Hien-yuen-chi, septième Empereur de cette période, Lo-pi, que le P. de Prémare suit surtout dans ses recherches, et non seulement Lo-pi, mais la plupart des auteurs, condensent un assez grand nombre de faits intéressants qui impliquent la connaissance plus ancienne, sinon aussi générale, de quelques uns d'entr'eux et nous permettent de nous figurer l'état de l'humanité à cette époque. Le règne de cet Empereur nous fournit en outre un point de repère très précieux relativement aux époques que la Géologie nous permet aujourd'hui d'établir.

Pour les Chinois l'humanité était encore confinée sur le mont Kouën-lün ou dans ses environs immédiats. Soit qu'il lui ait pris son nom, soit qu'il lui ait donné le sien propre, le nom de Hien-yuen-chi n'est pas autre, d'après le Lou-che, que celui d'une montagne située tout au bas du Kouën-lün, sur laquelle il se retira pour se mettre à l'abri du vent et des pluies.† Parmi les recueils des traditions, recueils fort anciens eux mêmes, qui se rapportent à ce règne, deux portent le nom de Se-hai et de Chan-hai-king. Or, le premier de ces titres veut dire les *Quatre Mers*, rappelant certainement qu'alors le monde, réduit cependant aux chaînes du Kouën-lün, était entouré de mers; et le second signifie: Livre des Montagnes et des Mers, indiquant ainsi et ce semble

* Page XC.

† Pages XCJ et XCIIJ.

d'une façon assez claire, que les plaines étaient encore submergées. Ce n'est pas la première fois, on peut le remarquer, que des faits analogues sont signalés à des intervalles de plusieurs milliers d'années; aussi ne hasarderons nous aucune conjecture sur la période glaciaire ou l'oscillation auxquelles ils se rapportent. Il nous suffira de noter que dès cette époque l'on connaissait, du moins ici, de ce côté du monde où fût le berceau de la société civilisée, l'on connaissait déjà non seulement l'échange, mais le commerce sorti de l'enfance, avec les plus significatifs de ses auxiliaires, la Monnaie et la Balance. On connaissait l'agriculture et l'industrie, on tissait des étoffes, &c. "Hien-yuen fit battre de la monnaie de cuivre et mit en usage la balance pour juger du poids des choses, par ce moyen l'Univers fût gouverné en paix. . . . Les marchandises consistaient en métaux, *Kim*, en pierres rares, *Yu*, (1) en ivoire, *Tchi*, en peaux, *pi*, en monnaie battue, *Tsuen*, (2) et en étoffes, *pou*.* D'un autre côté cependant, et c'est là un second point de repère, "les hommes sous cet empereur et jusqu'au douzième, ne sont point nombreux; on ne voyait que de vastes forêts; les bois étaient pleins de bêtes sauvages et l'on coupait les branches des arbres pour les tuer."† Notons aussi que c'est la première fois qu'il est question des métaux; mais, nous verrons tout-à-l'heure qu'on en parlera comme d'une chose déjà ancienne et remontant à Soui-gin, en même temps que la découverte du feu. Tout d'ailleurs en implique dès maintenant tous les usages. Enfin le tableau un peu trop naïf, pour qu'il soit utile de le rapporter en entier, que Lo-pi fait de la civilisation de cette société naissante, montre que ses besoins, intellectuels et moraux, étaient fort bornés; "l'Empereur respectait le peuple et ne négligeait rien. Sous lui les hommes vivaient en paix sans trop savoir ce qu'ils faisaient; ni où ils allaient. . . . Après avoir donné le jour au travail, ils donnaient la nuit au repos. Quand ils sentaient la soif ils cherchaient à boire, et quand la faim les pressait, ils cherchaient à manger. En un mot, ils ne connaissaient point encore ce que c'était que bien ou mal faire." C'était enfin cet état de satisfaction physique et d'insouciance qui précède

(1) Silicates de diverses sortes.

(2) "La monnaie de Hien-yuen avait un ponce sept lignes et pesait douze tchu. Un tchu est la vingtième partie du Yo, et le Yo pesait douze cents grains de millet, et on gravait des lettres sur ces monnaies."—Page XCIIJ.

* Page XCIJ.

† Page XCVJ.

dans l'homme l'âge des sensations plus nobles. L'humanité avait vingt ans. Elle avait vingt ans, car la voici, sous Tcho-yong, le onzième Empereur, qui s'enflamme de l'amour du bien et qui, tourmentée de ces aspirations vagues que l'on éprouve à cet âge, demande à ce qui l'entoure de nouvelles jouissances. La musique affecte son entendement et l'harmonie de la nature le pénètre. Sous Tcho-yong. "Le peuple s'excitait à la vertu avant qu'il fût menacé de châtimens. La société civile étant si bien réglée, l'Univers jouissait de la paix et toutes les créatures étaient soumises; ce fût alors que Tcho-yong, écoutant à Kan-tcheou, le concert des oiseaux, fit une musique d'union dont l'harmonie pénétrait partout, touchait l'esprit intelligent et calmait les passions du cœur de l'homme, de manière que les sens étaient sains; il appela cette musique: *Tsïe-ven*, c'est-à-dire: la tempérance et la grâce. Et ce n'est pas seulement une musique de sons dont parlent les antiquités chinoises; quoiqu'on y trouve souvent en effet des concerts de sons, le but principal est l'harmonie de toutes les vertus, de manière que le concert n'est parfait que quand le corps et l'âme étant d'accord, la concupiscence est soumise à la raison.* Au reste cette musique est toujours jointe à l'urbanité extérieure. La politesse, dit le Lou-che, regarde le dehors, mais elle doit venir du dedans... L'urbanité gouverne l'extérieur et la musique nous ramène au dedans de nous mêmes." (1)

* Page XCIV et Li-ki Chap. Yo-ki.

(1) On ne saura peut-être gré de citer ici, en dehors de ce travail, quelques passages des livres chinois qui, à l'occasion de la musique et de la danse, peuvent donner un léger aperçu de leur métaphysique et sont, d'un autre côté, propres à faire soupçonner que leur ancienne musique dont ils regrettent tant la perte, était bien une musique d'harmonie, encore que nous prétendions qu'ils n'ont jamais connu l'harmonie.

"Lo-pi dit que la musique n'est autre chose que l'accord des deux principes, l'un actif, nommé Yang, et l'autre passif, nommé Yn, sur lesquels roule la conservation du monde visible. En effet le bel ordre de l'Univers est une harmonie; et soit que l'on considère le monde physique, c'est-à-dire le Ciel et la Terre, ou le monde moral, c'est-à-dire l'Homme, ou le monde politique, c'est-à-dire le Royaume, ou tous les trois enchainés ensemble, on rencontre toujours ces deux principes qui doivent être d'accord, sans quoi, point d'harmonie. Lo-pi ajoute que le sage concerte les faux accords de l'Yn et de l'Yang et qu'il fait des instruments pour déclarer leur union. De tous les instruments qui font l'harmonie dont je parle, les deux principaux sont le *Kin* et le *Se*, (sorte de lyre et de harpe). L'un et l'autre sont essentiels au concert harmonique. Le premier gouverne le principe actif, et l'autre régit le passif, &c."

Cependant, quoique sorti depuis longtemps de la sauvagerie, l'homme n'est encore que dans les limbes de la civilisation; le bien être ne lui suffit plus et il a déjà la conscience du bonheur, mais ses facultés ne sont encore que des sentiments et il lui manque les deux plus fécondes; l'amour et la haine, que sous le seizième Empereur il n'aura pas encore acquises. En attendant, ses progrès suivent leurs cours; le nombre de ses idées s'accroît, les lettres qui les représentent se perfectionnent; * et, comme elles ne peuvent tout exprimer, il invente sous le quinzième Empereur, Tse-hang, un objet qui l'aide à traduire ses impressions. Le premier instrument de musique est trouvé et c'est la lyre à cinq cordes.† Notons en passant que, par suite d'un enchaînement d'idées, qui paraît très naturel aux historiens Chinois, et que ce n'est pas ici le lieu d'expliquer, cette invention est signalée à propos de circonstances tout à fait physiques. "En ce temps là, dit Lo-pi, les vents furent grands, les saisons tout-à-fait dérégées, les eaux ne s'écoulaient pas et les fleuves ne suivaient point leur cours," ce que l'on répète encore sous le quinzième Empereur Yu-kang qui enfin "invente la danse."‡

En ce temps le centre de l'empire était au Kan-sou actuel. Le onzième Empereur est enterré au midi du mont Hueng, près de la ville moderne de Hoen-y-tcheou dans le Chen-si. Le quinzième est aussi enterré au Chen-si au nord du mont Féou-poeï.§

"Lo-pi dit que la vie de l'homme dépend de l'union du Ciel et de la Terre et de l'usage de toutes les créatures. La matière subtile circule dans le corps; si donc le corps n'est point en mouvement la matière s'amasse et de là les maladies. Dans un règne paisible, on ne voit point de malades et sous un méchant roi, tout est en désordre, c'est pourquoi le Li-ki dit qu'on peut juger d'un règne par les danses qui y sont en usage. On dit aussi qu'on juge de la vertu d'un homme par la manière dont il touche le Luth ou dont il tire de l'arc. La danse est donc tellement un exercice de corps qu'en même temps elle se rapporte au Gouvernement comme la Musique."

Les personnes que cette question de l'ancienne musique chinoise intéresserait, pourraient lire le savant article renfermé dans le volume VI des Mémoires concernant les Chinois, et le chapitre Yo-ki du Li-ki. Ils y trouveraient des détails vraiment curieux sur les rapports que les Chinois établissent non seulement entre la musique, la physique et la géométrie, mais entre la musique et la philosophie, la politique, &c.

* Page XCVIJ.

† Page XCVIJ.

‡ Page XCXVIJ.

§ Page XCXVIJ.

Le seizième Empereur est Vou-hoai-chi. "On dit que sous son règne les hommes demeuraient tranquilles chez eux, et faisaient grand cas de tout ce qui les maintenait en santé; ils travaillaient du corps, mais leur cœur n'avait ni amour ni haine. Le monde était si peuplé que partout, d'un lieu à un autre, on entendait le chant des coqs et la voix des chiens; le peuple vivait jusqu'à une extrême vieillesse, sans avoir grand commerce les uns avec les autres, &c."

Mais il est inutile de dire que le monde était renfermé dans des limites beaucoup plus étroites qu'aujourd'hui; l'on verra tout-à-l'heure que l'on était encore loin de l'état où les derniers événements géologiques ont laissé le globe depuis les temps historiques jusqu'à présent. Sauf quelques points émergés dans le Tchéli, le Chan-tong, le Ngan-hoeï, le Hou-pé, les eaux couvraient toute la surface orientale et méridionale de la Chine actuelle. L'Empire ne comprenait donc qu'une petite surface du Chan-si, le Se-tchuen, le Chien-si, le Kan-sou et le versant des monts Kouen-lun contre lequel ces provinces sont adossées. Quant au Kouy-tcheou, au Yun-nan et au Kouang-si, il n'en est pas question. Ces provinces devaient être en partie exondées, il semble même qu'elles aient été habitées dès cette époque par quelques enfants perdus de cette primitive humanité, à en juger par l'état où les trouvèrent plus tard les conquérants qui les rattachèrent à la Chine de nos jours, et où se trouvent encore quelques tribus réfractaires à toute tentative de civilisation, connues sous le nom de Miao-tse, Man-tse, Lo-sse &c. &c. De même que les anciennes espèces animales que l'on retrouve vivantes dans certains lacs, ces tribus semblent avoir survécu à toutes les révolutions de notre planète. Humanité fossile dont il m'a été donné de voir quelques représentants pendant mon voyage dans les provinces occidentales de la Chine, ses mœurs paraissent offrir les ressemblances les plus frappantes avec les mœurs de la société contemporaine des Empereurs qui viennent de nous occuper, et ne seraient pas un des éléments les moins importants des études ultérieures. Rien donc ne serait plus désirable de voir enfin publier, même telles quelles, les recherches que le savant et regretté Dr. Bridgmann poursuivait depuis long temps sur ces peuplades à demi sauvages, recherches auxquelles il mettait, si je ne me trompe, la dernière main au moment de sa mort.

Monseigneur Chauveau, évêque actuel du Thibet, qui réside aujourd'hui à Ta-tsien-lou, sur la limite thibétaine du Se-tchuen,

et qui, auparavant, avait habité pendant vingt-cinq ans, le Yunnan et le Kouy-tcheou, avait réuni sur les Miao-tse et les Man-tse, dont on sait que ces provinces renferment un grand nombre, plus de deux volumes de notes. Malheureusement l'on dit que ces précieux manuscrits ont été détruits par un incendie. Mais il y a tout lieu de penser que l'on obtiendrait aisément que Monsgr. Chauveau communiquât ce qu'il aurait pu sauver des flammes, ou voulut bien recueillir ses souvenirs pour les mettre à la disposition de la Société.

Monseigneur Faurie évêque actuel du Kouy-tcheou, a, dit-on, fait des études analogues, de même que Monseigneur Pichon évêque du Se-tchuen occidental.

Ils me pardonneront de trahir ici leur modestie.

Un grand nombre d'auteurs chinois anciens et modernes, se sont aussi occupés de ces peuplades.

Nous arrivons maintenant à la dernière époque pré-historique, à l'époque de Fo-hi, de Chin-nong et de Hoang-ti, pendant laquelle les facultés de l'homme déjà adolescent vont se compléter, se fortifier et le feront enfin passer à l'âge adulte, en même temps que la Terre accomplira les dernières transformations auxquelles a succédé l'époque actuelle. Mais arrêtons-nous un instant. A voyager ainsi au travers de l'éternité, l'esprit hésite; et, peu habitué à de pareilles courses, doute de son guide; la lumière même, qui grandit à chaque pas, l'éblouit...Eh quoi, tant de chemin? tout seuls?

Tout seuls. Et n'est-ce donc point assez que Dieu nous ait, en nous créant, donné ce qu'il fallait pour marcher; ne nous suffit-il pas de savoir qu'il est là, et faut-il qu'il se manifeste à chaque pas? Et d'ailleurs regardons autour de nous; n'est-ce pas ainsi que les choses se passent? Rappelons-nous les grandes preuves que nous avons déjà recueillies. Mais d'abord interrogeons notre bon sens et le bon sens de ceux qui ont été élevés autrement que nous.

“Si l'on veut, dit un ancien Jésuite, (1) si l'on veut savoir quelle est sur cette matière la Grande Doctrine des Lettrés, il faut lire le Tchi-pen-ti-kang, imprimé en 1747, qui est comme le système universel de la Doctrine de l'Ecole de Confucius, sur la Religion, la Morale, la Politique, la Physique et toutes les sciences. Ce grand ouvrage en dix volumes, que les missionnaires regardent

(1) Mémoires concernant les chinois, Tome 11, pages 384 et 385.

comme très dangereux et très opposé à la prédication de l'Evangile parce qu'il se renferme dans le Déisme et dans la Religion Naturelle, est partout au niveau de la Raison et de la conscience qu'il contente trop pourqu'elles sentent aisément la nécessité de la révélation."

Pour moi je ne vois rien de plus admirable, ni qui puisse nous inspirer plus de confiance que cette coïncidence de deux histoires dont l'une, reconstruite par nous, et l'autre, suivie d'une façon aussi continue et aussi logique, aussi conforme aux faits récemment acquis. J'ai passé sous silence, afin de ne pas allonger outre mesure cette note déjà si longue, une multitude de traits, naïfs en apparence, mais qui, mieux que tout, décèlent la vérité et en sont les plus forts témoignages; et pour n'en rappeler qu'un, est-il admissible que les historiens de la dynastie des Han et des Song, c'est-à-dire postérieurs de quelques milliers d'années à l'époque qu'ils décrivent, aient imaginé, par exemple, de faire sortir de la terre des sources d'eau douce. On n'invente pas de pareils détails; et si j'en ai omis, l'auteur des *Recherches sur les temps préhistoriques* et les historiens chinois eux mêmes en ont, malgré leurs scrupules, négligé bien d'autres qui devaient leur sembler inutiles, mais qui pour nous encore une fois, seraient de lumineux indices. Malheureusement il est bien à craindre qu'il ne reste plus guère de ces titres précieux. Dieu sait dans quel état est le sous sol écrit qu'ils constituaient! Deux fois la torche a précédé le flambeau. De ce qui avait échappé aux mains sacrilèges de Tsin-chi-hoan-ti dont deux mille ans passés n'ont pu abolir la mémoire exécrée; de ce qui composait, il y a dix ans encore, les archives non seulement de la Chine, mais nos propres et nos plus vieilles archives, les archives du genre humain, Dieu sait ce que l'incendie naguère allumée de nos propres mains a pu laisser subsister!

Cependant tout n'est peut-être pas absolument perdu; peut-être serait-il possible de retrouver quelques uns de ces documents, soit en Chine, soit même en Europe où les anciens Jésuites ont envoyé un grand nombre de livre chinois. Il en est d'ailleurs que leur nature a pu sauver de la flamme aussi bien que du temps, tels que les inscriptions lapidaires, quelques monnaies, certains monuments et les outils de pierre, dont la collection la plus anciennement formée, était il y a quelques années encore, réunie dans le palais de Yien-min-yuen.

J'essaierai dans un dernier chapitre de donner une idée de ceux qui offriraient à nos recherches le plus d'intérêt. Mais je dois auparavant terminer l'esquisse historique de l'humanité d'avant Yao.

VI.

Le règne de Fou-hi, auquel nous sommes maintenant arrivés, est un des plus remarquables de la haute antiquité, mais il embrasse tant de faits qu'il y a lieu de penser que le souvenir de cet Empereur plane au dessus d'un temps beaucoup plus long que celui où il a régné individuellement, ainsi que, de nos jours encore, le souvenir du chef de famille prolonge en Chine son influence, j'allais dire sa vie, au delà du tombeau. Bien plus, comme tous les génies dont l'apparition a marqué une Ère dans l'humanité, Fou-hi marque son empreinte même sur un long passé. Long-temps avant sa naissance, son nom est répété et, ceux qui le précèdent, semblent n'être que ses précurseurs. C'est ainsi que nous avons vu un grand nombre de notions acquises à une époque antérieure, placées sous son nom, comme elles se trouveront plus tard récapitulées sous son règne. C'est ainsi qu'il absorbe dans sa puissante personnalité plusieurs règnes et entr'autres ceux de Kou-kong et de Niu-va, bien que très postérieurs, et dont cependant on ne fait que les auxiliaires de Fou-hi, l'un comme ministre et Niu-va comme sa femme, sa fille ou sa sœur. Mais, individuellement, Fou-hi ne règne que 115 ou 164 ans et individuellement ne se prouve, ne s'affirme que par deux ou trois circonstances tout-à-fait nouvelles; la domestication des six animaux,* (cheval, bœuf, poule, cochon, chien, mouton,) l'invention du calendrier† et le cérémonial du mariage,‡ qui, s'ils ne sont pas de lui, paraissent être trop rapprochés de son règne pour que l'on puisse les lui contester. Ce ne sont cependant pas ces innovations qui sont les grandes gloires de l'époque de Fou-hi. Arrivée à cette phase de son développement, l'on dirait que l'Humanité se recueille et qu'elle est plus préoccupée de perfectionner ses acquisitions que d'en faire de nouvelles. Déjà ces trois innovations de Fou-hi ne sont réellement au fond que des perfectionnements. Mais elle n'arrête point sa marche; et, si ses conquêtes sur le monde extérieur se ralentissent, ce n'est que pour changer de direction. L'Homme est à ce moment où ses besoins physiques sont suffisamment satisfaits pour que des besoins d'un autre ordre, les vrais, ceux qui le font homme, se fassent sentir. Il ne lui suffit plus d'avoir conscience de lui même, de la valeur de ses actions; le sentiment même d'un Être supérieur ne lui suffit plus; et, pour la première fois il se sent pris du noble

* Page CIIJ. † Page CV. ‡ Page CIV.

désir de savoir. Jetant les yeux autour de lui, et les élevant jusqu'au Ciel, il s'inquiète des rapports qui existent entre l'Homme et la Création, entre la Création et le Créateur, entre l'être et le devenir; et il ne se borne point aux rapports de causes à effets, mais il va les chercher jusque dans la nature intime des choses. Ce sont ces rapports que Fou-hi exprime par les immortels symboles que l'on connaît sous le nom de *Trigrammes de Fou-hi*.*

Tels sont les grands problèmes qui font de cette époque la date la plus solennelle de l'Humanité. Pourtant, au point de vue physique, elle n'est pas très avancée: Fou-hi n'est encore qu'un têtard ou peut s'en faut; il avait, dit Ven-tse, "le corps de serpent et la tête énorme," † et ce n'est que naturel, s'il est vrai que l'idée préexiste à la forme; mais c'est pour la dernière fois. On dit aussi que les armes de ce temps n'étaient encore que de bois, ‡ ou tout au plus de pierre, si l'on suppose qu'il y ait eu de la part des historiens Chinois, quelques transpositions dans les pages des traditions qu'ils ont étudiées; ce qui, d'ailleurs, paraît très possible. Mais qu'importe? Les peuples ont-ils attendu les progrès modernes de l'industrie et ceux même de la science pour avoir leurs Aristote et leurs Platon?

Les Recherches du Père de Prémare ne mentionnent aucune note qui puisse servir de point de repère un peu précis à la Géologie, et nous aider à rétablir la date du règne de Fou-hi. Il dit seulement que cet Empereur fit circuler les eaux, mais cette circonstance se renouvelle si fréquemment désormais qu'elle jette au contraire un grand vague sur les temps qui séparent Fou-hi de Yao. L'examen des documents primitifs dissiperait peut-être cette incertitude. Mais on trouve dans le Tcheou-pi-souan-king, une indication astronomique qui pourrait peut-être, jusqu'à un certain point, suppléer à cette lacune. On dit dans cet ouvrage fort ancien, mais postérieur à Fou-hi, et comme si le fait était de son temps, que l'étoile polaire s'appelle ainsi parce qu'elle est droit au centre du pôle. "Or comme le fait remarquer le P. Gaubil elle en est présentement assez loin; et par le chemin qu'elle a fait, on pourrait juger de l'antiquité de la tradition qui l'a conservée."§

Fou-hi fût enterré selon les uns à Choui-yang, et selon les autres à Tchén, mais si ces deux localités sont inconnues aujourd'hui, on sait du moins qu'elles étaient en Occident, et aux approches

* Page CJ. † Page CJ. ‡ Page CVJ. § Page CV.

du mont Kouën-lün, si ce n'est sur le mont lui même, où le Chan-hai-king place tous les tombeaux des anciens rois.

Kong-kong dont nous avons parlé tout-à-l'heure, est peut-être, de toute l'antiquité chinoise, le personnage sur lequel les opinions sont le plus partagées. Les uns lui attribuent des faits dont la date remonte à plusieurs siècles avant Fou-hi; les autres le font descendre de Chin-nong lequel lui est au contraire bien postérieur. Lo-pi pour expliquer cette différence, dit qu'il y a eu plusieurs Kong-kong dont les faits ont été confondus, et paraît croire que c'est à ce dernier Kong-kong qu'il faut rapporter ceux qui nous intéressent le plus. Je ne devrais donc en parler que beaucoup plus tard, et peut-être l'exposé qui nous occupe y acquerrait-il plus de clarté; je préfère cependant suivre le désordre scrupuleux du P. de Prémare, ne voulant pas trancher cette question, mais en laisser la solution à l'examen sérieux des documents originaux.

Il semble que Kong-kong ait été un mauvais prince aux actions duquel on ajouta la responsabilité des événements malheureux qui eurent lieu de son temps, en qui l'on se plut dès lors à personifier le mal et que l'imagination revêtit en suite de formes propres à représenter pour le mieux le caractère qu'on lui prêtait. "Enivré, dit le livre Kouei-tsiang, de sa prétendue prudence, il se regardait comme un pur esprit; il chargeait le peuple d'impôts et les exigeait à force de supplices; il employa le fer à faire des coutelas et des haches et le peuple, sans appui, périt misérablement; il se plongea dans toutes sortes de débauches et ses débauches le perdirent."*

C'est à cette époque que se produisit un déluge causé par le soulèvement du globe au nord-ouest, soulèvement qui entraîna un affaissement au sud-est et qu'on ne manqua pas de lui attribuer. "Afin de perdre son rival Kong-sang, Kong-kong fit le déluge; il donna un coup de corne contre le mont Pou-tcheou, tel que les colonnes du Ciel en furent brisées et que la terre eût une brèche au Sud-est;† ce qui la rendit insuffisante au Sud-est."‡ Outre les cornes, Kong-kong avait le visage d'homme, le corps de serpent et le poil roux. Un de ses ministres ou auxiliaires, Feou-yeou, avait le corps rouge comme le feu et ressemblait à un ours.§

Kong-kong fût défait par Kao-sin qui le précipita dans l'abîme.||

* Page CIX.

† Page CVIIIJ & CIX.

‡ Page CXIIJ.

§ Page CX.

|| Page CVIIJ.

Le déluge de Kong-kong s'arrêta ou du moins paraît avoir eu un temps d'arrêt pendant le règne de Niu-va qui vient ensuite, mais dont les faits sont cachés sous trop d'hyperboles pour que, excepté la circonstance que je viens de citer, je puisse y rien trouver, je l'avoue, qui ait pour nous un intérêt spécial et clair.

Toutefois, au lieu de les réfuter, comme ont fait beaucoup d'historiens Chinois, ce qui, dit le P. de Prémare est un triste parti, il est très possible que là encore, l'étude des documents originaux aide à les faire comprendre.

Cette observation s'applique également à un grand nombre des faits du règne de Chin-nong ou Chen-nong. On peut dire aussi de cet Empereur, comme on l'a dit de Fou-li, que tant de faits se trouvent récapitulés sous son règne, qu'il semble être devenu en quelque sorte *l'exposant* d'une longue époque, qui comprend soixante dix Empereurs: soit, suivant quelques historiens, plusieurs milliers d'années: soit même selon Lo-pi, plus de cent mille ans.* On place sous le règne de Chen-nong l'invention de la poterie et de la fonte, quoiqu'il paraît bien que l'on ait eu dès l'Empereur Souï-gin quelques notions de ces industries; on lui attribue l'invention du véritable vin, car "avant lui c'était l'eau pure que l'on appelait le vin, le vin céleste."† La reconnaissance populaire fit aussi de lui l'invention de l'agriculture; le nom même de Chen-nong signifie *le divin laboureur*; et en effet s'il ne l'inventa pas dans le sens strict du mot, il est certain que les foires, les marchés qu'il institua pour la première fois, les routes qu'il établit, durent la porter à un degré de prospérité qu'elle n'avait pas encore connu. "Chen-nong prit du bois fort et dur dont il fit le coître de la charrue et choisit du bois plus tendre pour en faire le manche."‡ Il apprit ainsi aux hommes à cultiver la terre avec plus de profit et moins de peine. Il sema les cinq sortes de blés au midi du mont Ki, (district actuel de Fuen-tchou-fou, au Chan-si) et établit des greniers où l'on conserva pendant l'hiver, les fruits de la terre. Consacrant le sentiment qui se fait jour pour la première fois de la propriété des biens acquis par le travail, il fit plusieurs lois pour que l'on n'envahit point les travaux d'autrui. Enfin il enseigna tout ce qui regarde le chanvre et le mûrier, afin qu'il y eût des toiles et des étoffes de soie en abondance.§

* Page CXXIV. † Page CXCI. ‡ Page CXVJ.

§ Page CXVJ.

“ Quoique Fou-hi ait commencé à guérir les maladies par la vertu des plantes, cet art est particulièrement attribué à Chin-nong. Ce fût lui qui distingua toutes les plantes et en détermina les diverses qualités. Un passage tiré du livre San-hoang-ki paraît vouloir dire que Chen-nong battait et remuait les plantes avec une espèce de fouet ou de spatule rouge, ce qui désignerait la Chimie, d’autant plus qu’on parle d’une marmite (Ting) dans laquelle Chen-nong éprouvait les plantes. Le seul mot *Ting* marque assez qu’il se servait du feu. Une tradition de son temps dit que les plantes se divisent en quantité d’espèces différentes, mais que, si on examine bien leur figure et leur couleur, si on les éprouve par l’odorat et par le goût, on pourra distinguer les bonnes des méchantes et s’en servir pour guérir les maladies.”* “Chen-nong ordonna à Tsio-ho-ki de mettre par écrit ce qui concerne la couleur des malades et ce qui regarde le poulx; d’apprendre si son mouvement est réglé et bien d’accord, pour cela de le tâter de suite et d’avertir le malade, afin de rendre par là un grand service au monde en donnant aux hommes un si bon moyen de conserver leur vie.”†

Dans un autre ordre de choses, Chen-nong institua des fêtes pendant lesquelles on devait s’abstenir de visites, de procès et de promenades.

“L’Y-king, dit Lo-pi, rapporte au symbole *Fou*: que les anciens Rois, le septième jour, qu’il appelle le grand jour, faisaient fermer les portes des maisons, qu’on ne faisait ce jour là aucun commerce et que les magistrats ne jugeaient aucune affaire; c’est ce que l’on appelle l’ancien Calendrier.”‡

“Chen-nong sacrifiait au Seigneur Suprême dans le temple de la Lumière, (Ming-tang;) rien n’était plus simple que ce temple, la terre de ses murs n’avait aucun ornement; le bois de sa charpente n’était point ciselé, afin que le peuple fit plus d’estime de sa médiocrité.”§

On dit que les lois de Chen-nong étaient gravées sur des planches carrées et qu’elles lui avaient été inspirées par le Ciel.||

“ Quelqu’étendu que fût l’Empire de Chen-nong, il était si peuplé et les habitants étaient si peu éloignés que les cris des animaux domestiques se répandaient et s’entendaient d’un village au village voisin. Le peuple n’était composé que de gens vertueux; les

* Pages CXIX et CXX.

§ Page CXXIJ.

† Page CXX.

|| Page CXX.

‡ Page CXVIIIJ.

mœurs étaient pures; on n'avait point ensemble de disputes et chacun s'estimait assez riche parce qu'il était content de ce qu'il avait sans se fatiguer."*

On dit que Chen-nong régna à Tchén, et qu'il fût enterré à Tchang-cha après avoir vécu 168 ans; mais, ainsi que je l'ai déjà observé, il ne faut pas oublier que tous les faits qu'on rapporte à son règne doivent être répartis dans une période de plusieurs centaines, ou peut-être même, de plusieurs milliers d'années.

À la fin de cette époque paraît un personnage qui offre tant de traits de ressemblance avec Kong-kong que l'on peut penser que les deux ne font qu'un. C'est Tchi-yeou aussi nommé Tchi-ti ou Fan-tsuen, dont l'imagination populaire a fait en Chine, un type qui présente beaucoup d'analogies avec certain mythe de nos légendes religieuses.

Tchi-yeou était un vassal du dernier roi de cette longue dynastie de Chen-nong. Irrité du despotisme de ce roi, il se révolta. Malheureusement la victoire qu'il remporta, au lieu de le calmer, exagéra le sentiment qui l'avait poussé à la rébellion, et il se fit, à son tour exécuter par son despotisme et ses débauches. Le Chou-king, à l'autorité duquel il n'est pas permis de se refuser, dit, en suivant les traditions anciennes, que Tchi-yeou est le premier de tous les rebelles et que sa rébellion se répandit sur tous les peuples qui apprirent de lui à commettre toutes sortes de crimes. On dit que Tchi-yeou était chef de neuf noirs (Kieou-li) qui se révoltèrent avec lui et qui lui restèrent associés dans la réprobation des siècles.

Le nom de Tchi-yeou signifie: le *Méchant*. Tel que l'imagination populaire se le représente, il a le corps d'un homme, les pieds de bœuf, des jambes et des cuisses de bêtes et des ailes de chauve-souris. Ses compagnons, les Kieou-li ou les neuf noirs, avaient le corps d'animaux et la tête de métal; c'est aux neuf noirs et à leur chef Tchi-yeou, leur aîné et leur chef qu'on attribue l'origine des révoltes, des fraudes et des tromperies.† Tchi-yeou fût défait par un autre prince nommé Hoang-ti, lequel, après l'avoir longtemps poursuivi, finit par le saisir et le tuer, ou bien, suivant une tradition plus imagée, le jeta dans la vallée des maux.‡

À Hoang-ti, commence une nouvelle dynastie sur la durée de laquelle les historiens ne sont pas d'accord, mais à laquelle Se-ma-

* Page CXXIII.

† Pages CXXVJ à CXXIX.

‡ Chou-king, pages 291 à 294.

tsien, dans son Che-ki, attribue quarante six générations. C'est elle qui précède immédiatement l'époque historique, l'époque de Yao. Malheureusement c'est sur celle-là que les Recherches du P. de Prémare fournit le moins d'indices que la géologie puisse utiliser. On y voit seulement que la Chine avait alors pour limites; à l'ouest, la province actuelle du Chen-si; au nord le Kuen-jo ou désert de Tartarie qui ne devait pas être émergé depuis long-temps puisque c'est la première fois qu'il en est question; à l'est, la mer; et au sud, le Yang-tse-kiang dont l'embouchure était beaucoup plus reculée qu'aujourd'hui et ne devait pas être bien éloignée de la ville actuelle d'Y-tchang. Toutefois, autant qu'on en puisse juger par les souvenirs qu'on a conservés de cette période, et par les préoccupations dont chaque règne, pour ainsi dire, porte la trace, il est évident que les eaux en sont le grand fléau et qu'elle doit par conséquent être contemporaine de l'oscillation terrestre qui a précédé les temps actuels.

Il ne serait peut-être même pas impossible, en tenant compte des circonstances que le coup d'œil que nous venons de jeter sur les dernières dynasties nous font deviner, de reconnaître les deux temps de cette oscillation; le premier, commençant au début de l'époque de Fou-hi, par le soulèvement du désert de Tartarie et l'immersion du sud-est du continent, arrivant à son maximum avec Kong-kong et s'arrêtant à la fin du règne de Niu-va et pendant celui de Chen-nong.—Quant au deuxième, afin de le comprendre, sans empiéter sur le règne de Yao et sur les temps historiques auxquels nous sommes arrivés et auxquels j'ai résolu d'arrêter ce travail, il faut cependant savoir que l'excessive abondance des eaux qu'il causa résulte des obstacles qu'elles rencontraient, et, qui quoique l'on fit, se renouvelaient et empêchaient leur écoulement vers la mer, puisque c'est à leur ouvrir des passages que la fin de l'époque de Hoang-ti et tout le règne de Yao sont consacrés. La cause de ce deuxième déluge, ou plutôt de ces inondations, est donc inverse en quelque sorte de la cause du premier. Pendant le premier, il n'est point question de travaux, d'endiguement, de canalisation, &c., et il n'en saurait être question. S'il y a déluge, ce n'est pas que les eaux ne s'écoulent point, et en effet ce n'est point la pente qui peut leur manquer puisque leurs réservoirs s'élèvent, mais c'est parce que les lits des fleuves et leurs bassins mêmes ne suffisent point à leur écoulement. Pendant le deuxième, si l'excès des eaux n'est pas tel qu'on ne puisse chercher à y remédier, c'est qu'il est causé moins par leur affluence que par le

changement et le rétrécissement en profondeur et en largeur de leurs lits, et par la diminution de la pente de ces lits. Or, si l'on cherche à s'expliquer ces obstacles, on voit qu'on ne peut les attribuer qu'à l'exhaussement du fond des fleuves, des rivages, &c., d'où le deuxième temps cherché. Il commencerait donc à la fin de la dynastie de Chen-nong, parviendrait à son maximum à-peu-près avec Tchi-Yeou et s'arrêterait à la fin de la période de Hoang-ti, de telle sorte que Yao et Yu purent, au moyen de travaux immenses dont on peut juger maintenant encore, puisque c'est à Yu que l'on fait remonter le principal réseau de canaux que l'on admire dans ces mêmes provinces du Kiang-nan et du Tche-kiang que nous habitons, de telle sorte, dis-je, que Yao et Yu purent au moyen de ces immenses travaux et de cent ou cent cinquante ans d'efforts, débarrasser le sol des eaux qui le couvraient.

Cependant, malgré le fléau, l'humanité continuait ses progrès. C'est dans le cours de la dynastie de Hoang-ti qu'elle découvre la boussole, et invente la navigation, ou du moins construit la première barque, la première pirogue.* Pour la première fois aussi on s'avise de représenter la sphère. Enfin c'est à Louï-tsu, femme de Hoang-ti, que l'on fait remonter la domestication du Ver à soie dont on se contentait jusque là de recueillir les cocons sur les arbres où cette chenille les déposait.

L'époque de Hoang-ti finit par le roi Tchi que l'on chassa à cause de ses désordres et que l'on remplaça par son frère Yao, auquel commencent le Chou-king et l'époque historique.

Il ne me reste plus dès lors qu'à présenter avec l'exposé des documents qu'il serait le plus possible et le plus intéressant de retrouver, les conclusions de ce travail, c'est-à-dire, les moyens que la Société Asiatique de Shang-haï pourrait peut-être employer pour se les procurer et les faire connaître. Mais arrivé à la fin de la tâche que je m'étais imposé, je ne puis m'empêcher de jeter un regard sur le long passé que quelques pages, pourtant, ont du suffire à dérouler. Que sommes nous? disais-je en commençant, d'où venons-nous, quand avons nous été créés, quels étaient nos ancêtres, comment se sont formées nos diverses races, comment ont-elles grandi? Eh bien, les livres que nous venons de consulter n'ont-ils point répondu, autant qu'œuvres humaines puissent répondre à de telles questions? Les lacunes de nos histoires nous étonnaient, notre esprit se cabrait devant les vides qu'elles lais-

* Page CXXXJ.

saient, leurs solutions de continuité nous embarrassaient; il me semble maintenant qu'en partie ces lacunes ont disparu, ces vides sont comblés, ces solutions de continuité n'existent plus. La chute de notre premier père n'est plus une contradiction: Adam avant sa chute, n'est pas autre que l'idéal Pan-kou; et cette chute n'est pas autre chose que la transition de l'idée à la forme. Je songe aux diverses races éparses sur le globe, les unes déjà écoulées et n'ayant laissé qu'un stérile souvenir, les autres disparues aussi mais après avoir jeté un éclat qui nous éclaire encore: celles-là jouissant d'une puissante vitalité et parvenues, ce semble, à l'apogée de leur développement; celles-ci grandissant et s'élevant encore. Je me rappelle leurs mœurs, leurs traditions, leurs croyances, leurs usages, leurs industries, leurs héros, leurs origines. Je les rapporte aux origines, aux héros, aux croyances, aux industries, aux usages, aux traditions et aux mœurs des races de ces grandes dynasties humaines qui viennent de se succéder sous nos yeux, et je me demande, si le livre que je tiens en ce moment et que j'ai un instant emprunté aux Chinois, n'est pas le livre souche de l'Humanité dont chaque race, sans exception, ne serait qu'un feuillet.

VII.

Les témoignages les plus authentiques, ceux dont la connaissance importe le plus par conséquent à nos recherches sont évidemment ceux que la nature s'est elle-même chargée de produire et de conserver. C'est, au point de vue spécial de la Géologie, tous les indices qui peuvent dénoter l'exhaussement ou l'abaissement du sol, tous ceux qui peuvent nous faire conjecturer l'état d'une contrée dans les âges antérieurs, je veux dire toutes les traces que les Glaciers ont pu y laisser. Ces indices s'observent par la nature du terrain; par la hauteur, l'altitude où il se trouve relativement au niveau de la mer; par la distance horizontale à laquelle il est des rivages; par les débris des espèces animales ou végétales qu'il recèle où dont il a pu garder les empreintes; par les dépôts glaciaires qui peuvent les recouvrir, tels que le drift, les moraines, les blocs erratiques et les cailloux roulés; par la direction des cours d'eau qui l'arrosent, les traces que les grandes crues laissent sur leurs bords; par les bancs, les îles et îlots dont leurs lits ou leurs embouchures peuvent être obstrués; et, sur les rivages, par certains accidents des côtes, des falaises ou des rochers. Je ne parle pas

des indices que renferment les profondeurs de la mer et que nos navigateurs n'ont que trop souvent l'occasion de signaler.

L'on a vu, dans le cours du travail qui précède, quelques exemples des faits qui se rapportent à cette première classe de témoignages. Lorsqu'il s'agit, soit de localités, soit des bancs de sable ou des rochers qui s'élèvent dans le lit des fleuves ou sur les bords de la mer, ou bien encore des dépôts de pierres amenés par les glaciers: moraines, blocs, drift, &c., il est nécessaire d'en décrire d'abord la situation géographique, l'orientation, la topographie, l'étendue ou la puissance; s'il s'agit du sol, il faut faire connaître sa nature, en rapporter, s'il se peut, des échantillons, aussi bien que des roches, cailloux, débris d'animaux que l'on rencontre à sa surface ou dans son épaisseur. On a vu quelles déductions importantes on tirait de l'analogie ou de la différence qui existent entre les roches ramassées sur le même terrain, des dimensions générales des cailloux, des blocs, &c. Un point très intéressant aussi au sujet des traces des anciens glaciers, est l'angle que les stries laissées par eux sur les flancs des montagnes et des rochers, fait avec l'horizon; la profondeur de ces stries.

C'est d'un bloc comme ceux dont il s'agit que le ministre Amita, envoyé par Kang-hi pour explorer le fleuve jaune, parle à l'Empereur en ces termes: "À la source de l'Alotan qui se jette dans le fleuve jaune (Hoang-ho) existe une pierre que l'on nomme en mongole Alotan-katafou-kaolao, ces trois mots disent en chinois: *roche d'or de l'étoile polaire*. Cette roche a été ainsi nommée à cause que par sa hauteur qui est de plus de cent pieds, et de sa couleur qui est d'un jaune d'or mêlé de quelques veines rouges, elle brille au loin et peut servir de visée comme l'étoile polaire. Elle a encore cela de particulier qu'elle est isolée et ne paraît tenir à aucune montagne."

À cette première catégorie d'observations on pourrait rattacher l'étude des lacs salés où vivent encore des poissons et crustacés qui n'ont pu y être déposés que par les eaux de la mer; l'exploration des forêts et des montagnes y ferait peut-être aussi découvrir d'autres espèces animales offrant de curieuses ressemblances avec les espèces disparues. Il y aurait surtout à étudier toutes ces tribus à demi sauvages qui, comme les tsiganes, errent dans presque toutes les provinces de la Chine, et les autres tribus fixées au Setchuen, au Kouy-tchéou, au Kouang-tong, au Kouan-si, au Yunnan, dont j'ai parlé sous le nom de Miào-tze et de Man-tze et que l'on regarde comme les races primitives des contrées qu'elles ha-

bitent. D'après le rapport que vient de me faire un missionnaire, Mr. l'abbé Mihières, Supérieur des missions du Kouang-si, arrivé depuis peu de ces provinces, elles paraissent avoir conservé des souvenirs d'un déluge et certaines notions qui pourraient bien n'être point différentes de celles que la lecture des Recherches du P. de Prémare nous ont fait connaître. Plus facilement que sur leurs mœurs et leurs traditions, l'on pourrait obtenir des renseignements et même des dessins propres à nous instruire sur leurs caractères physiques et en particulier sur ceux du crâne et du visage et sur leur couleur. Quelques unes de ces tribus sont blondes. Il ne serait point extraordinaire que l'on rencontrât parmi elles des individus appartenant aux races des sept couleurs dont les chinois paraissent avoir eu de tout temps la connaissance, savoir : les races *violette, jaune, couleur de chair, tirant sur le blanc, jaune pâle, blanche et noire*. L'on connaît du reste le dicton populaire d'après lequel un homme blond n'est point un cas extraordinaire, s'il vient d'au delà du Hoang-ho. Aux travaux de Messieurs Bridgmann et Chauveau que j'ai déjà mentionnés, j'ajouterai ici un petit travail fait par Mr. l'abbé Lyons, Provicair apostolique de la province de Kouy-tcheou, travail que l'on ne tardera pas à voir publié.

Telles sont les premières observations auxquelles tous les Européens, voyageant dans l'intérieur de la Chine, pourraient être engagés. Elles ne demanderaient de leur part ni beaucoup de temps, ni des recherches spéciales. Un peu plus d'attention peut-être qu'ils n'en apportent généralement à ces sujets suffirait à donner à leurs renseignements une très grande valeur ; et pour les obtenir d'eux, une seule chose est nécessaire, leur faire comprendre l'intérêt majeur qu'on y attache. Un trait, un fait, un détail, même infime en apparence, s'ils sont notés avec soin, peuvent devenir, en certaines circonstances, des témoignages de la plus haute gravité.

Une seconde classe de preuves seraient celles que les Européens fixés dans l'intérieur, missionnaires, marchands, ou autres pourraient recueillir dans les fouilles du sol ou des cavernes qui abondent, on peut le dire, dans presque toutes les provinces. C'est là que l'on trouverait des ossements d'animaux, peut-être des ossements d'hommes et des outils fabriqués de main d'homme ; il y a quelque temps, les Japonais découvrirent dans une grotte remplie et bouchée, une quantité de crânes et de débris humains de toute sorte qu'ils firent immédiatement inhumer dans un de leurs cimetières ordi-

naires. Il existe dans le commerce de la pharmacie chinoise, certains remèdes fournis par des ossements fossiles qui ne sont pas autre chose que ceux que l'on voudrait trouver. Au Kouytcheou où les cavernes sont en grand nombre, c'est dans leur intérieur que les chinois vont chercher le salpêtre; c'est de là aussi qu'ils tirent ces ossements fossiles qu'ils vendent ensuite aux pharmaciens. On en a extrait souvent des ossements d'animaux d'une dimension prodigieuse; des côtes plus large que la main.

Le palais de Yien-min-yuen renfermait il y a dix ans, d'immenses collections de toute espèce qui contenaient entr'autres un nombre considérable de fossiles,* animaux et végétaux. C'est là sans doute que se trouvaient aussi ces pierres en forme de haches, de couteaux, de maillets, de couleur noirâtre ou verdâtre† telles que celles que les Mongols des environs du désert de Cobi, trouvaient et trouvent probablement encore dans le sol et dans les cavernes de leur pays et dont ils se servaient en guise de cuivre et d'acier.‡

Quelques débris de ces collections existent peut-être encore; en tous cas comme le gouvernement Chinois avait la sage et prévoyante habitude de déposer à Gehol un double, ou au moins un dessin de chaque objet dont les collections s'enrichissaient§ il y aurait encore espoir d'y trouver de précieuses reliques. Exhumer ces richesses de l'oubli, où elles sont, serait, je crois, un des plus grands services que la Société Asiatique pût rendre à la science, si elle croyait devoir user de sa légitime influence pour obtenir la communication de ces riches collections, afin d'en prendre des copies qu'elle pourrait ensuite éditer. Nul doute que les ministres étrangers ne secondent cette initiative de tout leur pouvoir.

Je rangerai dans un second ordre de témoignages, soit parce qu'ils se rapportent à des temps moins reculés, soit parce que l'étude en est plus difficile et demande quelque temps de la part de ceux qui s'y livrent, ceux des médailles, monnaies, vases, cloches et miroirs de métal dont il existe aussi dans les cabinets impériaux de magnifiques collections.

Je trouve sur ce sujet dans le Volume IX des mémoires des anciens Jésuites, page 390, une note que je cite en entier. "La persécution de Tsing-chi-hoang, les guerres civiles, les grandes

* Mémoires concernant les Chinois, Tome II, page 368.

† Tome IV, page 424.

‡ Même volume, même page.

§ Tome II, page 368.

révolutions, les incendies, les tremblements de terre, les inondations subites, &c., ont détruit tous les monuments de la haute antiquité. On ne les connaît guère que par ce qu'en ont dit les écrivains contemporains. On n'a sauvé du naufrage général que des vases de cuivre, des miroirs, des cloches, &c., que l'avidité avait fait enfouir ou que leur poids avait sauvé de ses rapines. Ce qu'on a de mieux en ce genre aujourd'hui, a été trouvé dans des tombeaux, dans des ruines de palais et dans le fond des rivières. Quoique les inscriptions qui sont dessus, soient en anciens caractères, on les explique et les savants en ont fait usage pour vérifier bien des époques, et pour fixer les poids et les mesures de chaque Dynastie. Plusieurs de ces monuments antiques sont restés si long-temps dans la terre, que, quoique de métal, ils ne rendent aucun son et paraissent être une poterie fort mince. Tout le cuivre a été dissout, il ne reste que quelques petites veines éparses çà et là. D'autres qui ont été conservés dans l'eau, semblent faits de vert de gris. Les antiquaires Chinois se vendraient presque pour acheter ces inutilités augustes. Le ton des mœurs et du gouvernement pousse tout peu à peu dans les cabinets de L'Empereur. Les vrais Lettrés ne prisent que les monuments où ils trouvent des inscriptions qui leur donnent des lumières. On travaille depuis plusieurs années à recueillir tout ce qui mérite quelque attention en fait de grands monuments anciens, comme tours, arcs de triomphe, tombeaux, pierres sépulcrales, ponts, &c. Il me vient à l'esprit dans ce moment que la différence de grandeur et de régularité que l'on trouve entre les hiéroglyphes égyptiens des grandes pyramides et des petites, semble rendre témoignage au narré des Chinois. Le même embarras aura fait imaginer les mêmes expédients." Outre ces collections impériales, il en existe encore de particulières qui seraient aussi très intéressantes à consulter. On en trouve même entre les mains des Européens. Une des plus belles collections de médailles et monnaies chinoises qui existent, dit-on, est celle dont Mr. Fontanier, Consul honoraire, chancelier de la légation de France, vient de faire hommage à son gouvernement, après avoir consacré de longues années à la réunir. On assure qu'elle renferme des échantillons remontant incontestablement à douze cents ans avant J.C. Un grand nombre d'autres débris antiques tels que vases, armes, &c., en pierre et en bronze, ont été envoyés par les anciens Jésuites à Paris et à Rome, il y a plus d'un siècle.*

* Tome I, page 296.

Dans ce même ordre de documents je placerais ensuite les monuments, ou plutôt les débris de monuments tels que les tours, portiques, pierres sépulcrales, tombeaux dont parle la note ci dessus. Les portiques et les tombeaux surtout auraient un intérêt particulier depuis que l'on sait que les dolmens et allées couvertes de Bretagne avec lesquels les portiques et les tombeaux chinois, dont la construction est presque la même aujourd'hui, offre tant de ressemblance; depuis, dis-je, que l'on sait que les dolmens de Bretagne, attribués naguère au druidisme, sont en réalité des tombeaux des lointaines époques, immédiatement postérieures à l'âge des cavernes. On sait du reste que ces mêmes monuments mégalithiques ont été retrouvés sur le littoral du Danube, en Afrique, en Syrie et dans l'Hindoustan.

Cependant il ne faut pas oublier que ces monuments, de même que les pierres sépulcrales et en général toutes les inscriptions lapidaires, sont ceux que l'on trouve en moins grand nombre en Chine et ceux sur lesquels on doit faire le moins de fond, les plus anciens ayant été détruits par l'incendiaire Tsing-chi-hoang-ti au troisième siècle (250 ans) avant J. C. À peine en a-t-on pu sauver quelques fragments.* Toutefois il paraît que quelques uns portent des hiéroglyphes dont la comparaison avec les hiéroglyphes égyptiens ont souvent préoccupé les anciens Jésuites.†

Je ne parlerai pas des inscriptions lapidaires qui existent en grand nombre, d'après ce que m'écrivait il y a quelques jours un voyageur Français qui se trouvait à Si-ngan-fou (Chen-si),‡ dans cette ville et à Kaï-fong-fou. Bien qu'en effet les caractères en soient tellement anciens qu'aucun savant de la localité ne peut les déchiffrer, elles ne doivent pas, pour la raison que je viens de dire, remonter plus haut que Tsing-chi-hoang-ti.

Je ne parlerai donc pas non plus du chapitre Kou-tsi, vestiges de l'antiquité, de la géographie Y-tong-tchi, publiée sous Kang-hi, lequel parle assez au long de sept villes dont il ne reste plus que les noms et quelques ruines, puis des palais, des basiliques ou salles à plusieurs rangs de colonnes, des tours, des jardins, dont il ne reste plus que des ruines.§ Mais les ouvrages consa-

* Tome I, pages 58 et 316.

† Tome I, pages 294, 301, 305 et 317, et Tome II.

‡ On n'oublie pas que le Chen-si est une des provinces qui ont été le plus anciennement habitée.

§ Tome II, page 377.

crés à la description des médailles, vases, choches, &c., ouvrages qui existent en grand nombre en Chine seraient sans doute plus intéressants. Un des plus anciens et par conséquent un de ceux qu'il serait le plus désirable de connaître porte le titre de Po-kou-tou.

Ce livre nous conduit enfin à un troisième ordre de documents qui, s'ils ne sont pas des témoignages aussi authentiques que les précédents en ce qu'ils ne font que relater des faits nécessairement antérieurs, souvent défigurés par les récits, par la faiblesse de l'intelligence ou par l'imagination de ceux à qui on les doit, n'en fournissent pas moins des renseignements d'une haute valeur.

On a pu en juger par quelques citations que je leur ai empruntées dans le cours de ce travail. J'ai nommé les manuscrits sur planchettes, sur écorce, sur lames de métal, d'ivoire, auxquels je joindrai les livres imprimés ou manuscrits, qui, bien que d'une époque relativement ou même tout-à-fait moderne, peuvent en quelque sorte nous donner la clef des premiers.

Ainsi si l'on voulait d'abord se faire une idée des opinions des chinois et des données qu'ils peuvent avoir sur les sujets de nos recherches, je rappellerais, par exemple, le Tchi-pen-ti-kang dont les anciens Jésuites nous ont entretenus de façon à nous faire vivement désirer d'en avoir une traduction. L'ouvrage est en dix volumes dans lesquels, à propos de la Création, on a rapproché les enseignements des Kings et on en a présenté le système développé.

Quant aux autres ouvrages qui traitent des mêmes matières, le nombre en est réellement trop grand pour que j'aie la pensée de les énumérer, car il n'y a presque aucun historien chinois qui ne commence l'histoire par celle des premiers temps de la Création. Mais, pourvu qu'on ne se laisse pas influencer par les appréciations, plus ou moins fondées aux yeux de la science moderne, dont les anciens Jésuites les ont accompagnées, on pourrait lire avec fruit les dissertations analytiques très remarquables qu'ils ont faites sur les principaux de ces auteurs, et qui se trouvent publiées, notamment, dans le tome 1er des Mémoires concernant les Chinois (1).

(1) Les histoires chinoises paraissent être écrites avec un luxe de critique et de discussion comparable à celui que les Champolléon et les Leipsius de nos jours déploient dans leurs recherches sur l'Egypte, Rome, &c. Mais c'est sous la dynastie des Song, pendant le grand mouvement littéraire qui eût lieu alors et qui dura trois siècles, que cet esprit critique eût le plus de puissance.

Toutefois j'ajouterai au Tchi-pen-ti-kang, comme ouvrage auquel la citation que l'on a été obligé d'en faire dans le cours de notre examen des Recherches du P. de Prémare, donne le plus de mérite et peut d'avantage inspirer le désir de le connaître, j'ajouterai, dis-je, le Che-ki de Se-ma-tsien et le Lou-che de Lo-pi qui tous deux sont à la Bibliothèque Impériale de Paris.

Le Che-ki ne se borne pas à un exposé comme le Tchi-pen-ti-kang; il commente certains faits, certaines traditions; il offrirait donc à nos investigations un intérêt de plus.

Il y aurait particulièrement à lire, dans les 130 livres dont il se compose, les trois premiers des douze livres intitulés Pen-ki ou Fondements de l'Histoire.*

Le Lou-che est un ouvrage du même genre, mais renfermant de plus une foule de détails d'une profonde érudition.†

Je ne puis pas non plus passer sous silence le Vaï-ki ou Tong-kien-vaï-ki de Lieou-tao-yuen célèbre savant que Se-ma-kouang s'était associé pour rédiger, dans son "*Tong-kien*" ou Histoire Universelle, la partie antérieure à la dynastie de Tchou, c'est-à-dire 1,200 ans avant J. C. et qui la rédigea d'après les King.

Enfin je citerai le Tao-te-king dans lequel on verrait probablement aujourd'hui, si l'on peut en juger d'après l'opinion d'un ancien Jésuite, autre chose que des spéculations philosophiques ou métaphysiques. On sait qu'il a été composé par Lao-tse.‡

Cette première série des livres nous conduit à une autre composée des documents que l'on peut considérer comme originaux parce que les documents primitifs ayant à peu près tous été détruits, il n'en reste plus guère d'autres; parce que c'est sur ceux là que les écrivains chinois se sont appuyés, et qu'enfin ils ont été formés des récits recueillis avec soin, peu d'années après l'incendie, de la bouche de ceux qui avaient lu les premiers, ou recomposés par eux mêmes à l'aide de leurs souvenirs. Tels sont entr'autres Tso-kieou-ming, Hoang-sou-mi, Liu-pou-oueï, Tchinyuen &c., cités par Lo-pi et les meilleurs auteurs. Les uns écrivaient du temps même de Tsin-chi-hoang-ti, 240 ans avant J. C., les autres peu de temps après; les plus modernes ne vont pas au delà de 190 ans après J. C.; on peut donc admettre que les souvenirs des uns et les traditions dont les autres s'inspiraient

* Tome 1er, page 89.

† Tome 1er, page 93.

‡ Recherches sur les temps antérieurs au Chou-king, page XLIX, note 4.

ont été assez fidèles, assez rapprochés des documents authentiques pour mériter quelque crédit.

Il faut d'ailleurs remarquer que Sée-ma-tsien, qui vivait lui-même sous les Han, cite aussi, avec d'autres qui ont disparu ou sont devenus fort rares, ces mêmes documents; ce qui établit en leur faveur une grande présomption, puisque vivant à une époque plus rapprochée de la catastrophe, où les souvenirs étaient plus nombreux et pouvaient lui servir à en constater l'exactitude, Sée-ma-tsien ne les dément pas.

J'en citerai quelques uns d'après le P. Gaubil: Hoai-nan-tse qu'on appelle aussi Hoai-nan-vang, parce qu'il était roi de Hoai-nan au commencement de la dynastie des Han; c'est-à-dire vers l'an 209 avant J. C. Son palais était une académie de savants avec lesquels il creusait dans l'antiquité la plus reculée; c'est pourquoi ses ouvrages sont très curieux.

Kong-gan-koué qui, sous la même dynastie, fit une savante préface historique au Chou-king, dont il avait trouvé un exemplaire dans le creux d'un mur.

Hui-chin de la même époque, auteur du dictionnaire intitulé Choue-ven, où il donne l'analyse et le sens propre de chaque caractère et auquel on doit une grande multitude de traditions.

Tong-tchang-chiu, Tchun-huen dont le nom littéraire est Kong-tching, Tso-chi sont auteurs de divers Tchun-tsieou, ou de commentaires très estimés sur le Tchun-tsieou de Confucius. Celui de Liu-pou-ouei, qui vivait du temps même de Tsin-chi-hoang-ti, est plein d'antiquités très curieuses.

Tai-te et Hoang-fou-mi, de la même époque aussi, ont donné, le premier, un Li-ki commenté, nommé Ta-tai-li, le deuxième, l'ouvrage intitulé Ti-vang-ché-ki ou les dix périodes des dynasties des Ti-ouang.

Yang-yong, Kang-tsang-tse, Han-fei-tse, Yen-tse sont aussi auteurs de commentaires ou d'histoires de la même époque, et beaucoup d'autres dont je ne finirais point de citer les noms et les ouvrages.

Viennent ensuite une foule d'auteurs dont ils n'indiquent pas les ouvrages ou des ouvrages dont on ne connaît pas les auteurs, cités les uns et les autres par les grands historiens tels que Se-ma-tsien, Lo-pi, &c. Ainsi parmi les premiers Lie-tze, Tso-kieou-ming tous deux disciples de Confucius, Kouang-tse qui vivait avec le grand moraliste chinois, Tching-yuen-yong-tchi, Lao-tchen-tse, Yang-ching-ngan, &c., &c.

Et parmi les seconds : le Choui-king, le Tong-chin, le San-hoang-king, qui paraît être un des plus importants, le Che-pen ou dissertation sur les généalogies et dynasties incertaines, le Tan-hou-ki que Lo-pi cite souvent, le San-fen dont on dit que le meilleur exemplaire est caché au mont Ngo-moeï, le Ming-li-fu, le Se-hai ou les 4 mers, le Tcheou-pi-souan-king qui traite aussi d'astronomie, le Kin-tsan, le Han-li-tchi, le Fong-fou-tou ou recueil de traditions, le Po-kou-tou dans lequel on trouve les dessins des anciens vases et le Kang-mo auquel je m'arrêterai avec le P. Gaubil. Une édition de ce dernier ouvrage se trouve à la Bibliothèque Impériale de Paris, mais il paraît qu'elle est incomplète et qu'il en existe, d'après le P. Gaubil, qui renferment les anciennes traditions depuis Pan-kou jusqu'à Fou-hi. Bien que la plupart de ces livres soient fort rares aujourd'hui, il ne serait point impossible de les trouver, soit dans certaines bibliothèques particulières, soit dans celle des nombreux monastères bouddhistes qui existent en Chine et qui, comme ceux du Sinaï et de l'Olympe, sont les gardiens de ces trésors, soit dans ce qui reste des bibliothèques impériales de la Chine.

Je citerai ensuite, mais à part le Chan-hai-king qui est une géographie attribuée à l'Empereur Yu, contemporain de Yao, dans lequel on trouve des descriptions de plantes et d'animaux extraordinaires, le Yu-kong qui paraît être un ouvrage de même nature aussi attribué à Yu, la catégorie des livres appelés Tchou-chou ou livres écrits sur planchettes et un Pen-tsao-kan-mou ou histoire naturelle que plusieurs auteurs font remonter jusqu'à Chen-nong et que l'on dit avoir, ainsi que les deux précédents, échappé à l'incendie de Chi-hoang-ti.

Quoique l'herbier, dit une note que je trouve dans les mémoires des anciens Jésuites, Tome VIII, page 231, "quoique l'herbier attribué à Chin-nong et le Chan-hai-king qu'on dit être du célèbre Yu, soient probablement moins anciens, cependant ils sont d'une antiquité bien supérieure à tout ce qu'on a en Europe en ce genre. Le dernier va presque de pair avec les King pour le style; ses descriptions sont d'un vrai, d'un naturel et d'un pittoresque qui enchantent. Quel dommage qu'elles ne roulent que sur des singularités et sur des monstres faits à plaisir!* Ce qu'on verrait volontiers en Europe, ce serait la suite historique des phénomènes, comètes, tremblements de terre, sécheresses, grandes pluies, cha-

* Nous savons ce qu'il faut penser de cette appréciation.

leurs extrêmes, froids excessifs, grêles, orages, animaux singuliers, monstres, pestes, maladies épidémiques, &c., qu'on trouve dans les grandes annales pour plus de deux mille ans. Au lieu de s'amuser à augmenter la botanique de quelques nouvelles descriptions de plantes, que d'observations curieuses et utiles ne pourrait-on pas faire sur les vertus que la Chine attribue à celles qui lui sont communes avec l'Europe? Le grand herbier en 260 volumes est rempli de détails et d'observations sur les terres différentes, les eaux, pierres, pétrifications, métaux, minéraux, sel, fleurs, légumes, grains, plantes, arbrisseaux, insectes, poissons, oiseaux, animaux, &c., qui mériteraient l'attention des naturalistes et surtout des Physiciens et des Médecins. Ces derniers y apprendraient peut-être à faire usage des remèdes simples et aisés que la main du Créateur a mis au tour de nous; et à aider la nature d'une manière plus naturelle et moins dispendieuse."

Enfin je placerai dans une troisième série de livres les Kings qui peuvent fournir de nombreux jalons aux explorateurs, même pour des âges plus reculés que ceux qu'ils décrivent, et surtout l'Y-king, ou plutôt les commentaires que les philosophes, les savants, les hommes d'état et les empereurs de la Chine les plus illustres ont, depuis Fou-hi jusqu'à nos jours, faits sur l'explication donnée par Ouen-ouang des symboliques trigrammes. J'ai eu assez souvent l'occasion d'en parler dans le cours de ce travail pour qu'il soit inutile d'y revenir encore. On a pu se rendre suffisamment compte de l'intérêt qu'offriraient ces commentaires.

Je ne dois cependant pas oublier de prévenir que tous ne nous satisferaient pas également au point de vue auquel nous nous plaçons. Des trois Y-king originaux, c'est-à-dire des explications qu'en ont données Ouen-ouang, Chen-nong et Hoang-ti, le premier seul a été conservé, non cependant dans son intégrité primitive. Des chapitres ont été transposés, quelques uns mêmes ont été perdus. Beaucoup d'auteurs ont essayé de reconstruire cet ouvrage, et, dans le nombre quelques uns ont fait des erreurs d'interprétation qui le rendent souvent incompréhensible; d'autres, tout en le reconnaissant comme l'histoire de la Création, en ont dérivé des aphorismes moraux ou mystiques qui, détachés ensuite du texte, passent pour en être les commentaires, mais qui, quelque bien faits et judicieux qu'ils soient, ne doivent avoir pour nous que peu de valeur. Bien qu'ils soient approuvés par l'Académie Impériale des Han-lin et enseignés à la jeunesse chinoise, ils ne peuvent en effet que nous donner des résumés tronqués et trop abrégés des

matières qui nous intéressent, celles-ci n'ayant été prises que comme point de départ d'un enseignement moral plus développé. C'est aux grands commentaires que nous devons nous adresser, à ceux d'abord que les tribunaux littéraires et l'académie impériale reconnaissent et consultent; et aussi à quelques uns de ceux qu'ils rejettent parce que les interprétations qu'ils trouvent dans leurs ouvrages ne semblent pas assez justifiées ou assez plausibles, mais envers qui, eu égard à nos connaissances modernes, cette sévérité nous paraîtra trop rigoureuse. Toutefois la seule indication des noms de ces grands glossateurs formerait un trop fort volume pour que je l'entreprenne ici, et je me borne à renvoyer pour les principaux d'entr'eux aux volumes I, II et VIII des Mémoires des anciens Jésuites et à ceux que j'ai eu l'occasion de citer dans mon travail.

VIII.

Ainsi, on le voit, les questions qui nous agitent aujourd'hui ne sont pas nouvelles pour la Chine. De tout temps elles ont été sa plus grande et sa plus chère préoccupation; et, de quelque côté qu'on l'interroge elle est prête à répondre. Si les réponses que nous fournissent ses documents écrits et son histoire ont besoin d'être contrôlées, eux mêmes nous en indiquent les moyens. Nous avons ici pour nous instruire mieux que la mer, mieux que les lits des fleuves, mieux que les montagnes elles mêmes et la surface du sol; c'est, ils nous l'apprennent, aux flancs du Kouën-lün, sur les montagnes et dans les gorges et les vallées du Se-tchuen, du Kan-sou, du Chen-si qu'il faut chercher. Là sont les trésors qu'il nous faut découvrir, les témoins qu'il nous faut faire parler et qui, muets ou inintelligibles pour les Chinois d'aujourd'hui, seront pour nous éloquents.

On parle sans cesse d'ouvrir la Chine; on en parle surtout maintenant et nul moyen ne semble trop fort pour arriver à ce but.

Plût au ciel cependant qu'on en eût moins parlé et que, pour la première fois aujourd'hui, on lui demandât, au nom de la science et de l'intérêt commun de l'humanité, d'ouvrir ses portes qu'il y a des siècles elle avait un instant ouvertes, et que nos imprudences de toutes sortes, pour ne pas dire plus, lui ont fait refermer.

Plût au ciel que nous ne lui eussions jamais inspiré les défiances dont nous subissons maintenant les justes conséquences et ses clefs, que ses savants et ses hommes d'État eussent prêtées à nos

savants et à nos hommes d'État, j'en atteste les souvenirs des Marco Paulo, des Ricci, des Verbiest, de Shaal et de bien d'autres, et ses clefs, dis-je, seraient depuis long-temps aux mains de nos commerçants et de nos industriels qui, plus instruits des réelles possibilités, des vrais besoins moraux et matériels de la Chine, plus prudents et plus sages par conséquent, eussent obtenu des résultats bien autrement importants que ceux auxquels ils sont arrivés.

Cinq ou six cents millions d'importations (et de quelles importations,) est-ce donc là un chiffre si beau quand on songe que le peuple chez qui elles se font est à lui seul la moitié de la population du globe! Est-ce donc là un chiffre si satisfaisant après plus de deux cents ans de relations et cinquante ans d'efforts, je pourrais dire de lutte et de guerre?

On nous l'avait bien dit cependant: "Cherchez premièrement la justice et la vérité, &c., le reste vous sera donné par surcroît;" et pour l'avoir oublié, tout, à peu près, est à recommencer.

Laissons donc, puisque nous avons eu si peu de succès, laissons donc la parole à la science; et, satisfaits pour le moment du peu que nous avons obtenu, attendons avec patience les effets inmanquables de la confiance qu'elle rétablira. Quand ses pionniers parcoureront, en paix et honorés, toutes les provinces où les poussera la recherche de la vérité, notre commerce et notre industrie ne seront pas loin de les suivre.

Est-ce donc autrement d'ailleurs que les relations d'amitié et de commerce s'établissent et se maintiennent même entre nous, dans notre Europe? Qui efface les distances, qui abolit les séparations, qui calme les passions religieuses et politiques, qui a délivré le commerce lui même des entraves où il gémissait, il y a cinquante ans encore, chez toutes les nations de l'Europe?

Mais la science ne procède point avec précipitation, surtout ici, où on lui a donné tant à refaire; elle ne procède point non plus par le mépris envers ceux qu'elle veut connaître.

Débarrassons nous de ces préjugés qui nous font regarder les Chinois comme livrés aux préoccupations les plus matérielles, incapables des nobles inspirations de la science. Rien n'est plus faux qu'un tel sentiment et rien en outre n'est plus stérile. S'ils n'attachent pas à toutes les sciences le même intérêt que nous, c'est peut-être que nous ne savons pas les leur présenter sous le jour le moins douteux; en tous cas il en est une, celle que nous avons nommée la science par excellence, qui peut, maintenant que les progrès nous y ont amenés de notre côté, servir de trait

d'union entre eux et nous. Au nom de l'histoire de l'homme, de l'histoire de l'humanité, de l'histoire de la Chine elle même, offrons aux Chinois de mettre en commun ce qu'ils savent et ce que nous savons; et ceux que le pur intérêt scientifique ne déciderait pas, viendront à nous par orgueil national, car nulle science n'est peut-être aussi propre que la géologie et la paléontologie à les satisfaire.

Mais il faut d'abord pour cela notre concours à tous; que les uns déposent entre les mains de la Société Asiatique pendant quelques années, trois ou quatre seulement peut-être, la patience qui engendre le calme nécessaire; les autres, leur zèle ou leur science de la langue chinoise.

Alors, dirigés par la Société Asiatique, ceux-là recueilleront avec soin les documents de toute nature qu'ils pourront rencontrer, ceux-ci traduiront du chinois en langues Européennes et de celles-ci en chinois les ouvrages les plus propres à intéresser les deux peuples, à leur faire comprendre ce qu'ils veulent et ce qu'ils attendent l'un de l'autre dans l'ordre d'idées que je viens d'exposer; et peu à peu s'établira entr'eux un courant de confiance et de sympathie sur lequel on pourra enfin fonder les plus immenses et les plus durables relations.

Quant aux moyens matériels ils ne feraient pas défaut à une œuvre aussi générale et important à un aussi haut degré et à tant de points de vue le bien public. Je ne m'en préoccupe donc pas.

Les négociants, puisque ce sont eux qui sont le plus immédiatement intéressés, les chambres de commerce, toutes les sociétés savantes de l'Europe répondraient pour moi et fourniraient les prix dont la Société aurait à récompenser les traductions des ouvrages qu'elle désignerait et les recherches qui rempliraient son but.

ARTICLE VIII.

ITINERARY OF A JOURNEY THROUGH THE PROVINCES OF
HOO-PIH, SZE-CHUEN AND SHEN-SE.

By A. WYLIE.

Left bank of the Keang.	Right bank of the Keang.	Blakiston.	Statute Miles.	Chinese le.
沌口 Keuen-kow <i>v</i> <i>Stream</i>		Keuen-kow		30
小軍山 Seaou- keun-shan <i>h</i>		Golden Hill		
大軍山 Ta-keun- shan <i>h</i>		Gt. Golden Hill		25
	金口 Kin-kow <i>t</i> <i>Stream</i>	King-kow		5
	下沙湖 Hea-sha- hoo <i>v</i>			
紗帽山 Sha-maou- shan <i>h</i>				15
	上沙湖 Shang- sha-hoo <i>v</i>			
梅灘洲 Mei-tan- chow <i>b</i>		Mei-tan-chui		
大嘴 Ta-tsuy <i>v</i>				
東江腦 Tung- keang-naou <i>v</i>				25
鄧家口 Tàng-kea- kow <i>v</i>				
	牛角尖 Neu-keo- tseen			20
新灘口 Sin-tan- kow <i>v</i> <i>Stream</i>				15
	牌洲 Pae-chow <i>t</i>	Pai-chow		10
	老觀嘴 Laou- kwan-tsuy <i>v</i>			
小林灣 Seaou-lin- wan <i>v</i>		Hou-chin kwang		50

Left bank of the Keang.	Right bank of the Keang.	Blakiston.	Statute Miles.	Chinese le.
北河 <i>Pih-ho</i> 小洲頭 <i>Seaou-</i> <i>chow-t'ow v</i>	嘉魚縣 <i>Kea-yu</i> <i>heen</i>	<i>Kia-yu</i>		30
壩口 <i>Lung-kow v</i>	六溪口 <i>Luh-ke-</i> <i>kow v</i> <i>Stream</i>	<i>Lo-gi-kow</i>		50
	石頭口 <i>Shih-t'ow-</i> <i>kow v</i> <i>Stream</i>	<i>Shih-ta-kow</i>		25
茅埠 <i>Maou-poo v</i>				30
新提 <i>Sin-te t</i>		<i>Sing-ti</i>		15
螺山 <i>Lo-shan v</i> <i>Stream</i>				50
楊陵磯 <i>Yang-ling-</i> <i>ke v</i>				25
白螺司 <i>Pih-lo-sze v</i>				15
丁家洲 <i>Ting-kea-</i> <i>chow ha</i>	臨湘縣 <i>Lin-scang</i> <i>heen</i> <i>Stream</i>	<i>Ling-heang</i> <i>hien</i>		
荆河口 <i>King-ho-</i> <i>kow v</i>	<i>Stream</i>	<i>Kin-ho-kow</i>	123	30
觀音洲 <i>Kwan-yin-</i> <i>chow v</i>				
Sze-pa-kow		<i>Huc Reach</i> <i>Sze-pa-kow</i>	17	90
下車灣 <i>Hea-chay-</i> <i>wan t</i>	瓦子灣 <i>Wa-tsze-</i> <i>wan o</i>	<i>Hia-chay-wan</i>	23	30
上車灣 <i>Shang-</i> <i>chay-wan t</i>		<i>Shang-chay-</i> <i>wan</i>	4	

Left bank of the Keang.	Right bank of the Keang.	Blakiston.	Statute Miles.	Chinese le.
密圻腦 Yaou-ke- naou v	華容山 Hwa- yung-shan h	Chay-wan tongue Brine Bend Nan-tsuin hills		
	國子山 Twan- tsze-shan h	Ming hill		
	鹿角山 Luh-keo- shan h	Boulder shoal Ass's ears		
	塔市驛 Ta-she- yih v			60
新河口 Sin-ho- kow v		Point Adams		
劉家溝 Lew-kea- kow v		Farmer Point		
	桃花山 Taou-hwa- shan h			
	調絃口 Teaou- heen-kow v	Tiau-hien	38	50
	Stream			
	東山 Tung-shan h	Tian-hien range Atalante Bend		
	流發洲 Lew-fa- chow v			
候家腦 How-kea- naou v				
	石首縣 Shih- show heen	Shi-show and Skipper Point	38	40
楊發腦 Yang-fa- naou v				
黃家大路 Hwang- kea-ta-loo v				
		Sunday Island		
新塲 Sin-chang t				
郝穴 Ho-heue t		Ho-hia	23	

Left bank of the Keang.	Right bank of the Keang.	Blakiston.	Statute Miles.	Chinese le
觀音寺 Kwan-yin- she v	突起洲 T'uh-k'e- chow i	Storm Island		
窰灣 Yaou-wan v		Quan-yin-shih	18	
沙市 Sha-she t		Sha-sze	9	120
二碼頭灣 Urh-ke- tow-wan v				
沮河 Tseu-ho	太平溝 Tae-ping- kow	Taiping Canal		
	Stream	Kin-chow Reach		
石套子 Shih-taou- tsze v	淵市 Yuen-she v	Village Sandford Reach Small hamlet		
江口 Keang-kow t		Kiang-kow	20	
沮河 Tseu-ho				
瑪瑙河 Ma-naou- ho	百里洲 Pih-le- chow i	Tung-tsze	7	
董市 Tung-she t	埧洲 Pa-chow i	Spring Island Hope Island Grant Point	8	
	洋溪 Yang-ke v	Yang-chi	1	
枝江渡 Che-keang- too ha	枝江縣 Che- keang heen	Chi-kiang hien	4	
白洋 Pih-yang t		Pah-yang Mountains of the seven gates Bush Pagoda	8	210
	宜都塔 E-too-ta	I-tu hien	3	
	宜都縣 E-too heen	Chin Kiang Mount		
	清江 T'sing-keang	Bridgman Village		
	紅花套 Hung- hwa-taou v			

Left bank of the Keang.	Right bank of the Keang.	Blakiston.	Statute Miles.	Chinese le.
虎腦背 Hoo-naou- pei t	十二背 Shih-urh- pei b	Swain Island	17	
	觀音巷 Kwan-yin- gan			
臨江 Lin-keang 天然塔 Teen-jen-ta	脉氣山 Mih-ke- shan h	Tien-chow Pagoda		
宜昌府 E-chang foo	桃花舖水 Taou- hwa-poo-shuwy	I-chang	2	
		Mussulman Point		
梁村河 Leang- tsun-ho				
南津關 Nan-tsin- kwan v	刑官峽 Hing-kwan hea	I-chang Gorge	4	
	下平善埧 Hea- ping-shen-pa ha			
	上平善埧 Shang- ping-shen-pa v			
南沱 Nan-to v				
上紅溪 Shang- hung-ke	無義灘 Woo-e tan	1st Rapid	12	170
	黃陵舖 Hwang- ling-poo v			
羅鈿河 Lo-teen-ho	虎頭灘 Hoo-t'ow tan			
	鹿角灘 Luh-keo tan			
	三斗坪 San-tow- ping v	Shan-tow-pien	4	
	史君灘 She-keun tan			

Left bank of the Keang.	Right bank of the Keang.	Blakiston.	Statute Miles.	Chinese le.
	白洞子 Pih-tung- tsze b	Rapids		
太平溪 Tae-ping- ke v	達洞 Tā-tung	Kwa-dung		
白水溪 Pih-shwuy- ke				
黑崖子 Hih-yae- tsze v	衢溪 Keu-ke			60
杉木溪 San-muh- ke				
老官廟 Laou- kwan-meau v				
牛肝馬肺峽 Neu-kan-ma-fei hea		Lu-kan Gorge	8	
花橋水 Hwa- keaou-shwuy	新灘 Sin-tan v	Tsing-tan	5	
兵書寶劍峽 Ping-shoo-paou-keen hea		Mi-tan Gorge		
米倉口 Me-tsang- kow v				
香溪 Heang-ke	米灘 Me tan			
	茅坪溪 Maou- ping-ke			
	老歸州 Laou- kwei-chow v			
	Stream			
歸州 Kwei chow		Kwei-chow	6	90
	洑灘 See tan			
叱溪 Chih-ke		Yeh-tan Rapid		
洑灘 See-tan v	沙鎮溪 Sha-chin- ke			
	巴斗灘 Pa-tow tan			
Stream				
牛口 Neu-kow v		Niu-kow tan	7	
	Stream			

Left bank of the Keang.	Right bank of the Keang.	Blakiston.	Statute Miles.	Chinese le.
東嚷口 Tung-seang-kow <i>v</i> 舊縣 Kew-heen <i>b</i>	巴東縣 Pa-tung <i>heen</i> 青竹標 Tsing-chüh-peaou <i>b</i>	Pa-tung	4	80
西嚷口 Se-seang-kow <i>v</i> 元渡河 Yuen-too-ho	望夫渡 Wang-foo-too <i>v</i>			
雄灘 Heung tan <i>Stream</i>				
毋楮灘 Moo-choo tan <i>Stream</i>				
關渡口 Kwan-too-kow <i>v</i>	百里峽 Pih-le hea	Kwan-du-kow	6	
火焰石灘 Ho-yen-shih tan	南木園 Nan-muh-yuen	Wu-shan Gorge		
馬尾灘 Ma-she tan		Nan-mo-yuen	4	
富里溪 Foo-le-ke <i>v</i>	<i>Stream</i>			
金匾擔 Kin-peen-tan <i>b</i>				
新崩灘 Sin-päng tan				
鐵棺材山 Teih-kwan-tsae-shan <i>b</i>	板橋溪 Pan-keou-ke	Northern Boundary		90
邊魚溪 Peen-yu-ke	培石 Pei-shih <i>v</i>	Southern Boundary		
	白水 Pih-koo-shuuy	Pei-shih	7	
	神女廟 Shin-neu-meau			

Left bank of the Keang.	Right bank of the Keang.	Blakiston.	Statute Miles.	Chinese le.
香爐灘 Heang-loo tan				
巫山十二峰 Woo-shan-shih-urh-fung h				
	沙木嚷 Shah-muh-seang ha			
	觀渡河 Kwan-too-ho			
宮家坊 Kung-kea-fang b	眺石 T'eaou-shih v			
空亡沱 Kung-wang-to b				
大寧河 Ta-ning-ho				
巫山縣 Woo-shan heen		Wu-shan hien	13	60
鏡架灘 Kin-kea tan				
烏磧 Woo-tseih b				
下馬灘 Hea-ma tan				
錯開峽 Tso-keah hea				
	大溪口 Ta-ke-kow v	Tai-chi	12	
	大溪河 Ta-ke-ho			
風箱峽 Fung-seang hea		Fung-siang Gorge		
	孟良梯 Mǎng-leang-te b			
	粉壁堂 Fun-peih-tang b			
灤頭堆 Yen-yu-tuy		An isolated rock		
白帝城 Pih-te-ching				
八陣圖 Pa-chin-t'oo v				
		Quai-chow Bluff		
大漢河 Ta-jang-ho				
夔州府 Kwei-chow foo		Quai-chow Foo	6	80
馬湖灘 Ma-hoo tan				

Left bank of the Keang.	Right bank of the Keang.	Blakiston.	Statute Miles.	Chinese le.
頭塘溪 <i>Tow-tang-ke</i>	關武鎮 <i>Kwan-woo-chin ha</i>			
司岳沱 <i>Sze-yen-to ha</i>	五龍溪 <i>Woo-lung-ke</i>			
	老馬溪 <i>Laou-ma-ke</i>			
老馬灘 <i>Laou-ma tan</i>	安坪 <i>Gan-ping v</i>	Low-ma Rapid An-ping	8	60
青崖磧 <i>Tsing-yae-tscih b</i>	黃石嘴 <i>Hwang-shih-tsuy ha</i>	Nine Pins		
	古林渡 <i>Koo-lin-too v</i>	Ku-lin-tu	5	
廟基灘 <i>Meaou-ke tan</i>		Miou-ki Rapid		
下巴子 <i>Hea-pa-tsze ha</i>				
東陽 <i>Tung-yang v</i>	東陽灘 <i>Tung-yang tan</i>	Tung-yan Tung-yan Rapid	3	
東漢河 <i>Tung-jang-ho</i>	新軍河 <i>Sin-keun-ho</i>			
雲陽縣 <i>Yun-yang heen</i>	盤沱 <i>Pwan-to v</i>	Yung-yan hien	6	60
下巖 <i>Hea-yen ha</i>		A pretty village Excavations		
小江口 <i>Seaou-keang-kow t</i>				
小江 <i>Seaou-keang</i>		Siau Kiang	12	60
下巴峽 <i>Hea-pa hea</i>	錫臘洞 <i>Seih-lah-t'ung b</i>			

Left bank of the Keang.	Right bank of the Keang.	Blakiston.	Statute Miles.	Chinese le
大周溪 Ta-chow- ke v				
五土地 Woo-too-te ha				
長石尾 Chang- shih-wei ha				
道人灘 Taou-jin tan				
萬縣 Wan heen		Wan Hien	17	60
西河 Se ho				
千金島 Tseen-kin taou				
渡口溪 Too-kow-ke				
小湖灘 Seaou-hoo tan				
白水溪 Pih- shwuy-ke v Stream				
天湖灘 Ta-hoo tan		Hu Rapid		
楊河溪 Yang-ho-ke				
壤河溪 Jang-ho-ke				
	天溪口 Ta-ke- kow v	Ta-chi-kow	16	
仰渡驛 Yang-too- yih v		Shan-tu		60
麻榴沱 Ma-lew-to v				
武陵 Woo-ling t		Hu-lin	7	
合溪 Hō-ke				
	西界沱 Se-keac-to t	Si-kiai-tow	6	
石寶碧 Shih-paou- chae v		Shi-pow-chai	2	60
塗井河 Too-tsing-ho				
關溪 Kwan-ke v				
	黃華城 Hwang- hwa-ching b	Shang-quan-chi	9	
	沿溪 Yuen-ke t Stream	Soldier Island		
倒鬚灘 Taou-seu tan				
淪溪 Yen-ke		Tow-to-hiu Rapid		
	鐘溪 Chung-ke			

Left bank of the Keang.	Right bank of the Keang.	Blakiston.	Statute Miles.	Chinese le.
忠州 <i>Chung chow</i> 鴨玉溪 <i>Ming-yuh-ke</i> 臭水溪 <i>Ch'ow-shuwy-ke</i>	神溪 <i>Shin-ke</i>	<i>Chung chow</i>	13	90
塘土堤 <i>T'ang-too pa</i>	烏洋 <i>Woo-yang v</i>	<i>Wu-yang</i> Mandarin Island	5	
新場 <i>Sin-chang v</i>	白馬子 <i>Pih-ma-tsze ha</i>	<i>Sin-chan</i>	3	
	三條嶺 <i>San-teaou-ling ha</i>			
	羊渡溪 <i>Yang-too-ke t</i>	<i>Yang-tu-chi</i>	8	
	復興鎮 <i>Fuh-hing-chin v</i>			70
灘子沱 <i>Tan-tsze-to</i>	石灘 <i>Shih tan</i>	<i>Lan-chu Rapid</i>		
	鸞珠堤 <i>Lwan-choo pa</i>	<i>Binguei Island</i>		
挫溪 <i>Tso-ke</i> 丁溪 <i>Ting-ke</i>	高家鎮 <i>Kaou-kea-chin t</i>	<i>Pa-ka liang</i>	11	
赤溪 <i>Chih-ke</i> 龍停溪 <i>Lung-ting-ke</i>				
豐都縣 <i>Fung-too heen</i>	葫蘆溪 <i>Hoo-loo-ke</i>	<i>Kow-kia-wan</i> River <i>Fung-tu hien</i>	12	60
天佛灘 <i>Ta-fuh tan</i> 觀音灘 <i>Kwan-yin tan</i>	白水溪 <i>Pih-shuwy-ke</i>			
竈門子 <i>Tsau-mun-tsze</i>		<i>Sou-mun-tsze</i>	9	
釐石鎮 <i>Le-shih-chin v</i> 馬灘河 <i>Ma-tan-ho</i>				

Left bank of the Keang.	Right bank of the Keang.	Blakiston.	Statute Miles.	Chinese le.
	馬頸子 Ma-king- tsze v			
百背 Pih-peï v	羅雲溪 Lo-yun-ke			
渠溪河 K ^{eu} -ke-ho	南沱 Nan-to v	Lan-tu	6	
深溪 Shin-ke t		Sun-chi	5	
坪須坨 Ping-sen pa		St. George's Island		
	清集場 Tsing- tseih-chang v	Siu-show	9	60
	黔江 Keen-keang	Kung-tan Ho		
梨河 Le-ho	涪州 Foo chow	Fu chow	6	70
	李渡 Le-too v	Li-tu	6	
沙州 Sha chow		Writer Island		
	甯市 Ning-she v	Lin-shih	9	60
		Hwang-pin-ma Rapid		
	石家沱 Shih-kea- to v	Shi-kia-tu	4	
龍溪河 Lung-ke-ho				
桃花溪 Taou-hwa- ke				
長壽縣 Chang- show heen		Chang-show hien	9	70
	扇背沱 Shen-poi- to v	Pei-tu	5	
洛磧場 Lo-tseih- chang t		Lo-shih	7	
上坨 Shang pa		Fuzzeler Island		
禾洪江 Tae-hung- keang				
禾洪崗 Tae-hung- kang v				
	忠江寺 Chung- keang-she ha			
	木洞鎮 Muh- tung-chin t	Hu-tung	11	60
當山峽 Tang-shan hea		Gorga		

Left bank of the Keang.	Right bank of the Keang.	Blakiston.	Statute Miles.	Chinese le.
魚藉沱 Yu-tseay-to v				
石板灘 Shī-pan tan				50
銅鑼峽 Tung-lo hea		Iron Gorge		
<i>Stream</i>				
唐家沱 Tang-kea- to v				
理明府 Le-ming foo		Li-min Foo		
合州河 Hō-chow-ho		Ho-tow River		
重慶府 Chung- king foo		Chung-king Foo	21	50
	文峰塔 Wan- fung ta	Pinnacle Pagoda		
明月峽 Ming-yuē hea				
佛圖關 Fuh-too- kwan t				
九龍灘 Kew-lung tan v				
	青岩子 Tsing-yac- tsze b			
	毛溪河 Maou-ke-ho			
天渡口 Ta-too- kow v				
	魚洞鎮 Yu-tung- chin v			
	魚洞溪 Yu-tung-ke			
天中堤 Ta-chung pa		Mahomet Island		60
龜亭子 Kwei-ting- tsze h		Kin-tin tsze		
龜亭溪 Kwei-ting- ke				
	甘蔗溪 Kan-chay- ke			
白沙沱 Pih-sha-to v	洛黃石 Lo-hwang- shih v	Lo-whan-chi	27	
金溪 Kin-ke				

Left bank of the Keang.	Right bank of the Keang.	Blakiston.	Statute Miles.	Chinese le.
金劍山 Kin-keen- shan <i>h</i>				
貓兒峽 Maou-urh <i>hea</i>		Limestone Pass		
銅灌驛 Tung- kwan-yih <i>v</i>		Tung-quan-yeh		
	江口 Keang-kow <i>v</i>			
	碁江河 Ke-keang- ho	Chi-kiang		
甕壩沱 Ung-pa-to <i>ha</i>				
李家河 Le-kea-ho <i>ha</i>				
	江津縣 Keang- tsin <i>heen</i>	Kiang-tsze <i>hien</i>	14	60
中渡 Chung-too <i>v</i>				
	魚子沱 Yu-tsze-to <i>v</i>			
	龍門灘 Lung-mun tan <i>v</i>	Lung-mun	10	
	樂城溪 Yo-ching- ke			
	洪猪峽 Hung-choo <i>hea</i>			
油溪 Yew-ke				
油溪場 Yew-ke- chang <i>t</i>		Yo-chi	4	70
奎光背 Kin- kwang-peï <i>b</i>				
五洞溪 Woo-tung- ke				
土墩溪 Too-tun-ke <i>ha</i>				
流水崖 Lew- shwuy-yae <i>ha</i>				
灘磐 Tan-pwan <i>ha</i>	中白沙 Chung- pih-sha <i>t</i>	Chung-pa sha	8	
	仁和埧 Jin-ho <i>pa</i>			
石門場 Shih-mun- chang <i>t</i>		Shi-mun	5	60

Left bank of the Keang.	Right bank of the Keang.	Blakiston.	Statute Miles.	Chinese le.
	對溪 <i>Tuy-ke</i> 二溪 <i>Urh-ke v</i>	Ur-chi	7	
洙溶溪 <i>Choo-yung-ke</i>				
榮蕩溪 <i>Choo-yang-ke v</i>				
松溉鎮 <i>Sun-keae-chin t</i>		Sung-chi	3	
中埧 <i>Chung pa</i>		Zuman-sha Island		
朱家沱 <i>Choo-kea-to t</i>	官溪 <i>Kwan-ke v</i>	Chu-kia-tu	2	60
天鹿溪 <i>Ta-luh-ke</i>				
	三喜山 <i>San-he-shan ha</i>			
板場埧 <i>Pan-chang pa</i>		Havildar Island		
	羊石磬 <i>Yang-shih-pwan t</i>	Yang-shi-pan	6	
順江場 <i>Shun-keang-chang v</i>				
	坪坦河 <i>Ping-tan-ho</i>			
	王家場 <i>Wang-kea-chang t</i>			60
董坎渡 <i>Tung-fun-too ha</i>				
	高洞河 <i>Kaou-tung-ho</i>			
	赤水河 <i>Chih-shui-ho</i>	Chi-shui		
	合江縣 <i>Hö-keang-heen</i>	Ho-kiang hien	11	
上白沙 <i>Shang-pih-sha t</i>		Tow-pung-shih	7	
	天橋溪 <i>Ta-keou-ke</i>			
	天橋 <i>Ta-keou v</i>	Mi-tu-nien		60
	大河溪 <i>Ta-ho-ke</i>			

Left bank of the Keang.	Right bank of the Keang.	Blakiston.	Statute Miles.	Chinese le.
中埧 <i>Chung pa</i>		Schereschewsky Island		60
小陶朱 <i>Seaou-taou- choo ha</i>	Mei-too-chang <i>t</i>	Liang-tiow- nieu Sin-tu-kow Rapid	6	60
新路口 <i>Sin-loo- kow v</i>		Bill Island		
新機子 <i>Sin-ke-tsze ha</i>				
毛爬崖 <i>Show-pa- yae ha</i>	泰安場 <i>Tae-gan- chang ha</i>			60
龍溪 <i>Lung-ke</i>		Fu-sung River		
沱江 <i>To-keang</i>		Lu chow	21	60
瀘州 <i>Loo chow</i>	籃田三埧 <i>Lan- teen-san-pa t</i>	Lan-tien-pa	2	
石礮關 <i>Shih-päng- kwan t</i>	<i>Stream</i>			
	納溪縣 <i>Na-ke heen</i>	Na-chi hien	11	70
	納溪 <i>Na-ke</i>	Yun-lin River		
小溪 <i>Seaou-ke</i>				
野猪崖 <i>Yay-chop- yae v</i>				
天角石 <i>Ta-keo- shih v</i>				
觀音場 <i>Kwan-yin- chang v</i>				
	天渡口 <i>Ta-too- kow t</i>	Ta-du-kow		60
	清溪 <i>Tsing-ke</i>			
下溪 <i>Hea-ke</i>		Gingall Point		
上溪 <i>Shang-ke</i>				
井口 <i>Tsing-kow v</i>	二龍口 <i>Urh-lung- kow v</i>			

Left bank of the Keang.	Right bank of the Keang.	Blakiston.	Statute Miles.	Chinese <i>le</i> .
白沙渡 Pih-sha-too <i>ha</i>	怡樂溪 <i>E-lo-ke</i> 江安縣 <i>Keang-gan heen</i> 安寧河 <i>Gan-ning-ho</i>	Kiang-an <i>hien</i> An-lui-kow River Sarel Island	23	60
头石盤 Ta-shih-pwan <i>b</i>		Barton Island		
南溪縣 Nan-ke <i>heen</i> 桂溪 <i>Kwei-ke</i>		Nan-ki <i>hien</i>	13	60
	里庄場 <i>Le-chwang-chang t</i>	Li-chuang-pa	13	60
仙人場 Seen-jin-chang <i>ha</i> 福溪 <i>Fuh-ke</i> 掛弓山 Kwa-kung-shan <i>v</i>		Pa-ko-shan	5	
	來復渡水 <i>Lae-fuh-too-shuwuy</i> 南廣洞 Nan-kwang-tung <i>v</i>	Hunan River Tang-wan	3	
叙州府 Seu-chow <i>foo</i>		Su-chow <i>foo</i>	3	60
			923	3525

RIVER MIN.

Left bank of the Min.	Right bank of the Min.	Chinese <i>le</i> .
弔黃樓 Teaou-hwang-low <i>v</i> 銅鑼灣 Tung-lo-wan <i>b</i> 蘇波溪 Soo-po-ke <i>r</i>	菜埧 Tsae-pa <i>hu</i>	

Left bank of the Min.	Right bank of the Min.	Chinese le.
牛口 Neu-kow <i>ha</i>	牛尿匾 Neu-she-peen <i>t</i>	60
千佛崖 Tseen-fuh-yae <i>ha</i>		
江脚磧 Keang-keo-tseih <i>v</i>		
黃沙溪 Hwang-sha-ke <i>v</i>		
石鴨灘 Shih-ya <i>tan</i>		60
鄧頭溪 Täng-tow-ke	真溪口 Chin-ke-kow <i>v</i>	
	真溪河 Chin-ke-ho	
高崖 Kaou-yae <i>b</i>	黃天埧 Hwang-teen <i>pa</i>	
蠻洞溪 Man-tung-ke		70
觀音溪 Kwan-yin-ke		
觀音峽 Kwan-yin <i>hea</i>		
永樂埧 Yung-lo-pa <i>b</i>	脚溪 Keo-ke <i>v</i>	
	龍溪 Lung-ke	60
杆栢場 Kan-pih-chang <i>v</i>		
太公埧 Tae-kung <i>pa</i>		
泥溪 Ne-ke <i>v</i>		
月波場 Yue-po-chang <i>t</i>	天沐溪 Ta-muh-ke	60
藤柳場 Ma-lew-chang <i>t</i>	紫雲山 Tsze-yun-shan <i>h</i>	
么姑場 Yaou-koo-chang <i>t</i>	青水溪 Tsing-shawuy-ke	
孝女岳 Heaou-neu-yen <i>b</i>	河口 Ho-kow <i>v</i>	
Watercourse	犍爲縣 Keen-wei <i>heen</i>	60
	蠻洞 Man-tung	
兆溪耗灘 Chaou-ke-haou <i>tan</i>		
兆溪耗 Chaou-ke-haou	煤炭口 Mei-tan-kow <i>v</i>	
石家埧 Shih-kea-pa <i>ha</i>	大碼頭 Ta-ma-tow <i>v</i>	
	羅葉溪 Lo-ye-ke	
	石板 Shih-pan <i>t</i>	

Left bank of the Min.	Right bank of the Min.	Chinese le.
杏埧 Hang-pa <i>b</i>		
磨子場 Mo-tsze-chang <i>t</i>		
道士冠 Taou-sze-kwan <i>ha</i>	西埧場 Se-pa-chang <i>t</i> <i>Small watercourse</i>	70
竹根灘 Chüh-kan-tan <i>t</i>		
四望溪 Sze-wang-ke		
牛華溪 New-hwa-ke <i>t</i>		
沙板灘 Sha-pan-tan <i>v</i>		
青衣埧 Tsing-e-pa <i>v</i>		
榮合竈 Yung-hö-tsaou <i>ha</i>		
馬鞍山 Ma-gan-shan <i>h</i>	陽江 Yang-keang	
烏尤山 Woo-yew-shan <i>h</i>		
太佛寺 Ta-fuh-she <i>h</i>	嘉定府 Kea-ting foo 竹公溪 Chuh-kung-ke	60
尼溪 Ne-ke	Hwan-leang-tsuy <i>v</i>	
老觀音廟 Laou-kwan-yin- meaou <i>v</i>		30
Pan-seaou-ke <i>v</i>		10
漢陽場 Han-yang-chang <i>t</i>	金牛河 Kin-neu-ho	40
	新磨河 Sin-mo-ho	
	瑞峰場 Suy-fung-chang <i>v</i>	100
<i>Watercourse</i>		
象鼻子 Seang-pe-tsze <i>b</i>	青神縣 Tsing-shin keen	
魚蛇水 Yu-shay-shwuy		
太平場 Tae-ping-chang <i>v</i>	張家坎 Chang-kea-kan <i>t</i>	
黃家場 Hwang-kea-chang <i>t</i>	醴泉江 Le-tseuen-keang	
	黃中埧 Hwang-chung-pa <i>ha</i>	50
	眉州 Mei chow	10
	九眼橋 Kew-yen-keaou <i>ha</i>	

Left bank of the Min.	Right bank of the Min.	Chinese le.
	彭山縣 Pang-shan <i>heen</i>	50
二郎灘 <i>Urh-lang tan</i>	<i>Watercourse</i>	
江口 Keang-kow <i>t</i>		10
順河場 Shun-ho-chang <i>t</i>		20
黃龍溪 Hwang-lung-ke	黃龍溪 Hwang-lung-ko <i>t</i>	
	古佛洞 Koo-fuh-tung <i>v</i>	
	白馬灘場 Pih-ma-tan- chang <i>v</i>	
	傅家埧 Foo-kea-pa <i>t</i>	
蘇碼頭 Soo-ma-tow <i>t</i>		
洞子場 Tung-tsze-chang <i>ha</i>		
	二江寺橋 Urh-keang-she <i>keaou</i>	
中興場 Chung-hing-chang <i>t</i>	新開河 Sin-keae-ho	
	走馬河 Tsou-ma-ho	
	三瓦窰 San-wa-yaou <i>v</i>	160
	<i>Stream</i>	
	成都府 Ching-too foo	20
		940
司馬橋 Sze-ma-keaou <i>v</i>		
由子河 Yew-tsze-ho		
歡喜巷 Hwan-he-gan <i>v</i>		
天廻鎮 Teen-hwuy-chin <i>t</i>		
沱江 T'o-keang		
毗橋河 Pe-keaou-ho		
錦水河 Kin-shwuy-ho		
瓦店子 Wa-teen-tsze <i>ha</i>		
新都縣 Sin-too <i>heen</i>		40
督橋河 Tuh-keaou-ho		
唐家市 Tang-kea-she <i>t</i>		
湔水 Tseen-shwuy		
向陽場 Heang-yang-chang <i>t</i>		

	Chinese <i>le.</i>
清白江 <i>Tsing-pih-keang</i>	
張華鎮 <i>Chang-hwa-chin t</i>	
通道橋 <i>Tung-taou-keau v</i>	
馬水河 <i>Ma-shuuy-ho</i>	
西成橋 <i>Se-ching-keau t</i>	
石堤橋 <i>Shih-te-keau v</i>	
漢州 <i>Han chow</i>	60
鴨子河 <i>Ya-tsze-ho</i>	
鳳凰寺 <i>Fung-hwang-she ha</i>	12
小漢鎮 <i>Seaou-han-chin t</i>	8
平橋河 <i>Ping-keau-ho</i>	
白魚河 <i>Pih-yu-ho</i>	
石亭江 <i>Shih-ting-keang</i>	
大漢鎮 <i>Ta-han-chin v</i>	
荷照橋 <i>Ho-chaou-keau v</i>	
竹林舖 <i>Chuh-lin-poo ha</i>	20
德陽縣 <i>Tih-yang heen</i>	10
牛耳舖 <i>Neu-urh-poo v</i>	10
簡家林 <i>Keen-kea-lin v</i>	2
仙人橋 <i>Seen-jin-keau v</i>	3
孟家店 <i>Mäng-kea-teen v</i>	4
黃許鎮 <i>Hwang-heu-chin t</i>	4
綿陽河 <i>Meen-yang-ho</i>	
林坎鎮 <i>Lin-kan-chin v</i>	
青剛嘴 <i>Tsing-kang-tsuy ha</i>	
白馬關 <i>Pih-ma-kwan ha</i>	17
羅江縣 <i>Lo-keang heen</i>	10
冷水河 <i>Lang-shuuy-ho</i>	
黑水河 <i>Hih-shuuy-ho</i>	
二井舖 <i>Urh-tsing-poo v</i>	
大井舖 <i>Ta-tsing-poo v</i>	15
金山舖 <i>Kin-shan-poo t</i>	15
雞鳴磽 <i>Ke-ming-keau v</i>	10
新舖 <i>Sin-poo v</i>	10
皂角舖 <i>Tsaou-keö-poo t</i>	10
石磽舖 <i>Shih-keau-poo v</i>	15
茶坪河 <i>Cha-ping-ho</i>	
涪江 <i>Pei-keang</i>	

	Chinese le.
綿州 <i>Meen chow</i>	15
涪江 <i>Pei-keang</i>	
東河 <i>Tung-ho</i>	
鮮魚橋 <i>Seen-yu-keaou v</i>	8
濫泥舖 <i>Lan-ne-poo v</i>	7
杭香舖 <i>Hang-heang-poo v</i>	10
蔡家橋 <i>Tsae-kea-keaou ha</i>	10
沈香舖 <i>Yew-heang-poo t</i>	10
銅瓦舖 <i>Tung-wa-poo v</i>	10
魏城 <i>Wei-ching t</i>	10
魏城水 <i>Wei-ching-shwuy</i>	
七里埧 <i>Tseih-le-pa ha</i>	7
萱花舖 <i>Seuen-hwa-poo t</i>	10
石牛舖水 <i>Shih-neu-poo-shwuy</i>	
羅漢橋 <i>Lo-han-keaou ha</i>	13
石牛舖 <i>Shih-neu-poo t</i>	5
板橋舖 <i>Pan-keaou-poo v</i>	10
火燒橋 <i>Ho-shaou-keaou ha</i>	14
梓潼河 <i>Tsze-t'ung-ho</i>	
梓潼縣 <i>Tsze-t'ung heen</i>	6
水觀音 <i>Shwuy-kwan-yin ha</i>	10
吉香舖 <i>Keih-heang-poo v</i>	10
上亭舖 <i>Shang-ting-poo v</i>	20
酒店埧 <i>Tsew-teen-ya v</i>	10
演武舖 <i>Yin-woo-poo v</i>	10
瓦子埧 <i>Wa-tsze-ya v</i>	10
武連河 <i>Woo-leen-ho</i>	
武連驛 <i>Woo-leen-yih t</i>	10
大灣里 <i>Ta-wan-le ha</i>	15
垂泉舖 <i>Chuy-tseuen-poo v</i>	5
柳池溝 <i>Lew-ch'e-kow t</i>	20
柳溝 <i>Lew-kow</i>	
講書臺 <i>Keang-shoo-tae ha</i>	10
梁山舖 <i>Leang-shan-poo v</i>	10
青林舖 <i>Tsing-lin-poo ha</i>	10
周埧子 <i>Chow-ya-tsze ha</i>	5
劍州 <i>Keen chow</i>	5
劍水 <i>Keen-shwuy</i>	

	Chinese <i>le.</i>
五里碑 Woo-le-pae <i>ha</i>	5
土門寺 Too-mun-she <i>ha</i>	10
抄手舖 Chaou-show-poo <i>v</i>	5
漢陽場 Han-yang-chang <i>v</i>	20
青樹子 Tsing-shoo-tsze <i>ha</i>	
五里坡 Woo-le-po <i>v</i>	15
劍門關 Keen-mun-kwan <i>t</i>	5
劍門水 Keen-mun-shuwuy	
誌公寺 Che-kung-she <i>ha</i>	
十五里碑 Shih-woo-le-pae <i>ha</i>	15
七里坡 Tseih-le-po <i>v</i>	5
高廟舖 Kaou-meaou-poo <i>ha</i>	10
大木樹 Ta-muh-shoo <i>v</i>	10
劍門水 Keen-mun-shuwuy	
竹垭子 Chuh-ya-tsze <i>ha</i>	8
天雄閣 Teen-heung-kō <i>ha</i>	22
五里壩 Woo-le-ya <i>v</i>	5
昭化縣 Chaou-hwa <i>heen</i>	5
嘉陵江 Kea-ling-keang	
桔栢渡 Keih-pih-too <i>v</i>	
張家渡 Chang-kea-too <i>ha</i>	10
張家灣 Chang-kea-wan <i>ha</i>	10
皂角舖 Tsaou-keo-poo <i>v</i>	10
五里壩 Woo-le-ya <i>ha</i>	12
蘇惠連故里 Soo-hwuy-leen-koo-le <i>ha</i>	4
稻壩河 Taou-pa-ho	
廣元縣 Kwang-yuen <i>heen</i>	4
千佛崖 Tseen-fuh-yae <i>v</i>	10
須家河 Seu-kea-ho <i>v</i>	10
大洞子 Ta-tung-tsze <i>v</i>	10
葡萄架 Poo-taou-kea <i>v</i>	10
飛仙關 Fei-seen-kwan <i>ha</i>	10
沙河驛 Sha-ho-yih <i>v</i>	10
新店子 Seen-teen-tsze <i>v</i>	10
魯奉口 Loo-fung-kow <i>v</i>	10
朝天關 Chaou-teen-kwan <i>ha</i>	10
朝天鎮 Chaou-teen-chin <i>t</i>	13
潛水 Tseen-shuwuy	

	Chinese <i>le.</i>
土門寺 Too-mun-she <i>ha</i>	14
龍門閣 Lung-mun-kō	6
神宣驛 Shin-seuen-yih <i>t</i>	7
緡房舖 Te-fang-poo <i>v</i>	10
中子舖 Chung-tsze-poo <i>v</i>	10
小屯子 Seaou-tun-tsze <i>ha</i>	7
轉斗舖 Chuen-tow-poo <i>v</i>	5
閭家河 Yen-kea-ho	
教場埧 Keaou-chang-pa <i>t</i>	8
七盤關 Tseih-pwan-kwan <i>ha</i>	5
黃堤驛 Hwang-pa-yih <i>v</i>	10
牢圍關 Laou-poo-kwan <i>ha</i>	10
迴水河 Hwuy-shwuy-ho <i>v</i>	10
碾盤石 Chen-pwan-shih <i>v</i>	10
甯羗州 Ning-keang chow	5
白巖河 Pih-yen-ho	
五里坡 Woo-le-po <i>v</i>	20
滴水舖 Teih-shwuy-poo <i>v</i>	10
五丁峽 Woo-ting <i>hea</i>	
五丁關 Woo-ting-kwan <i>v</i>	10
寬川舖 Kwan-chuen-poo <i>v</i>	15
斬龍凹 Chan-lung-yaou <i>v</i>	15
漢源溝 Han-yuen-kow	
烈金埧 Leih-kin-pa <i>v</i>	8
扶安水 Ta-gan-shwuy	
扶安鎮 Ta-gan-chin <i>t</i>	2
桑樹灣 Sang-shoo-wan <i>v</i>	10
金灘舖 Kin-tan-poo <i>v</i>	2
青陽驛 Tsing-yang-yih <i>v</i>	8
Stream	
Stream	
蔡埧 Tsae-pa <i>v</i>	15
新舖灣 Sin-poo-wan <i>v</i> (left bank of Han)	2
渭水 Meen-shwuy do.	
渭縣 Meen heen do.	43
黃沙驛 Hwang-sha-yih <i>t</i> do.	
Stream do.	
白巖河 Pih-yen-ho (right bank of Han)	

	Chinese <i>le.</i>
新街子 <i>Sin-keae-tsze v</i> (left bank of Han)	50
黑龍江 <i>Hih-lung-keang</i> do.	
漢中府 <i>Han-chung foo</i> do.	60
高臺鎮水 <i>Kaou-tae-chin-shucuy</i> (right bank of Han)	
衡家堤 <i>Häng-kea-pa v</i>	15
漢江 <i>Han-keang</i>	
安家渡 <i>Gan-kea-too ha</i>	10
南沙河 <i>Nan-sha-ho</i>	
王家河 <i>Wang-kea-ho v</i>	25
七里店 <i>Tseih-le-teen v</i>	5
板橋壩 <i>Pan-täng-ya ha</i>	7
大路坪 <i>Ta-loo-ping v</i>	18
雙園子 <i>Chwang-yuen-tsze v</i>	15
孫家坪 <i>Sun-kea-ping t</i>	20
茶條溝 <i>Cha-teaou-kow v</i>	22
沙河 <i>Sha-ho</i>	
沙河坎 <i>Sha-ho-kan t</i>	8
苦竹堤 <i>Koo-chuh-pa v</i>	20
馬鬃灘 <i>Ma-tsung-tan t</i>	10
木馬河 <i>Muh-ma-ho</i>	
西鄉縣 <i>Se-heang heen</i>	50
東渡口 <i>Tung-too-kow v</i>	
板橋灣 <i>Pan-keaou-wan v</i>	10
洋河 <i>Yang-ho</i>	
來家梁 <i>Lae-kea-leang ha</i>	15
三郎舖 <i>San-lang-poo v</i>	15
白河峽 <i>Pih-meen-hea t</i>	30

Left bank of the Han.

Right bank of the Han.

	茶鎮 <i>Cha-chin t</i>	40
	洋河 <i>Yang-ho</i>	
珍珠河 <i>Chin-choo-ho</i>		
石泉縣 <i>Shih-tseuen heen</i>		60
蓮花石 <i>Leen-hwa-shih v</i>		30
池河 <i>Ch'e-ho</i>		
	油坊坎 <i>Yew-fang-kan v</i>	30

Left bank of the Han.	Right bank of the Han.	Chinese le.
<i>Stream</i>		
梅湖 Mei-hoo v		30
馬家營 Ma-kea-yung ha	漢陽坪 Han-yang-ping v	50
漢王城 Han-wang-ching t		40
小松河 Seaou-sung-ho		5
紫陽縣 Tsze-yang heen	渚河 Choo-ho	
米溪仙洞 Me-ke-seen-tung		95
		30
	汝河 Joo-ho v	
	汝河 Joo-ho	
	大道河 Ta-taou-ho v	40
	小道河 Seaou-taou-ho v	20
流水店 Lew-shwuy-teen v		30
	嵐河 Lan-ho	
	嵐河口 Lan-ho-kow v	30
	香河 Heang-ho	
越河 Yue-ho	興安府 Hing-gan foo	130
	黃羊河 Hwang-yang-ho	
	十里舖 Shih-le-poo v	30
	二郎舖 Urh-lang-poo v	
	二郎灘 Urh-lang tan	
	<i>Stream</i>	
	梨家埧 Le-kea-pa v	90
	閭河 Leu-ho	
	閭河舖 Leu-ho-poo v	
洵陽縣 Seuen-yang heen		30
洵河 Seuen-ho		
高店舖 Kaou-teen-poo v		20
構園水 Kow-yuen-shwuy		
蜀河關 Shuh-ho-kwan t		60
汰棕溪 Ta-tsung-ke		
	冷水河 Lang-shwuy-ho	50
甲河 Kea-ho	月兒潭 Yue-urh-tan v	30
甲河關 Kca-ho-kwan t		40
	白河 Pih-ho	

Left bank of the Han.	Right bank of the Han.	Chinese le.
	白河縣 Pih-ho heen	20
	小白石河 Seaou-pih-shih-ho	
	San-chung-ho	
黃連水 Hwang-leen-shwuy	南峰 Nan-fung h	90
曲遠河 Keuh-yuen-ho	陡河 Tow-ho	90
鄆陽府 Yun-yang foo	Small watercourse	60
	小嶺塘水 Seaou-ling-tang-shwuy	
安陽口 Gan-yang-kow t		60
	遠河保 Yuen-ho-paou v	30
Watercourse	遠河 Yuen-ho	
	白浪塘水 Pih-lang-tang-shwuy	
	均州 Keun chow	60
	曾河 Tsang-ho	5
	浪河口 Lang-ho-kow ha	55
	青山港 Tsing-shan-keang t	20
	滄浪 Tsang-lang i	20
蕭江口 Seaou-keang-kow v		10
丹河 Tan-ho	青石舖水 Tsing-shih-poo-shwuy	
沙陀營 Sha-to-ying ha		10
客洛河 Kih-lo-ho	尖角底 Tseen-keo-te v	50
老河口 Laou-ho-kow t		10
客洛河 Kih-lo-ho		
仙人渡 Seen-jin-too t	余家河 Yu-kea-ho	40
	南河 Nan-ho	30
	古路嘴 Koo-loo-tsuy v	10
	廟灘 Meaou-tan t	5
柴店崗 Chae-teen-kang v		
Watercourse		
太平店 Tae-ping-teen t		10
Watercourse		

Left bank of the Han.	Right bank of the Han.	Chinese <i>li.</i>
	茨河 Tsze-ho <i>t</i>	20
	白馬洞 Pih-ma-tung <i>b</i>	10
竹篠舖 Chuh-teaou-poo <i>t</i>		20
樊城 Fan-ching <i>t</i>	襄陽府 Seang-yang foo	40
張家灣 Chang-kea-wan <i>v</i>		10
白河 Pih-ho		
吳山頭 Woo-shan-tow <i>t</i>		10
東津灣 Tung-tsin-wan <i>t</i>		20
	石灰窖 Shih-hwuy-yaou <i>v</i>	30
	陸家集 Luh-kea-tseih <i>v</i>	5
陸家灣 Luh-kea-wan <i>v</i>		10
	小河口 Seaou-ho-kow <i>v</i>	20
	羅家河 Lo-kea-ho	
	明針店 Ming-tsin-teen <i>v</i>	5
官庄 Kwan-chwang <i>t</i>	宜城縣 E-ching heen	25
		40
	蠻河 Man-ho	
流水溝 Lew-shwuy-kow <i>t</i>		50
豐樂河 Fung-lo-ho		
賀家集 Ho-kea-tseih <i>v</i>		30
	樂鄉河 Lo-heang-ho	
二神廟 Urh-shin-meau <i>v</i>	利河口 Le-ho-kow <i>v</i>	30
直河 Chih-ho <i>ha</i>		15
黃庄 Hwang-chwang <i>v</i>		5
周家嘴 Chow-kea-tsuy <i>v</i>		5
	唐港 Tang-keang <i>t</i>	
寨子河 Chae-tsze-ho	Watercourse	
	石牌鎮 Shih-pae-chin <i>t</i>	70
	馬良 Ma-leang <i>t</i>	
應家集 Yin-kea-tseih <i>ha</i>	沙洋鎮 Sha-yang-chin <i>t</i>	100
多寶灣 To-paou-wan <i>t</i>		30
	Stream	
聶家灘 Yeh-kea-tan <i>t</i>		70
	小林江 Seaou-lin-keang <i>v</i>	
巴家塲 Pa-kea-chang <i>ha</i>		30
張集港 Chang-tseih-keang <i>t</i>		45

Left bank of the Han.	Right bank of the Han.	Chinese le.
官吉口 Kwan-keih-kow <i>v</i>	<i>Stream</i>	
黑流渡 Hih-lew-too <i>t</i>		
岳口 Yo-kow <i>t</i>	<i>Stream</i>	30
彭市河 P'ang-she-ho <i>t</i>		30
麻陽潭 Ma-yang-tan <i>v</i>		45
多祥河 To-tseang-ho <i>t</i>		20
	仙桃鎮 Seen-taou-chin <i>t</i>	20
	<i>Stream</i>	12
副嘴 Foo-tsuy <i>v</i>	烟家灣 Yen-kea-wan <i>v</i>	10
脈旺嘴 Ma-wang-tsuy <i>t</i>		
<i>Stream</i>		50
分水嘴 Fun-shwuy-tsuy <i>t</i>	楊林溝 Yang-lin-kow <i>v</i>	
三汊潭 San-cha-tan <i>v</i>		
蚌湖 Pwan-hoo <i>v</i>		
城隍港 Ching-hwang-keang <i>t</i>		
楊池口 Yang-che-kow <i>v</i>	廟頭 Meaou-tow <i>v</i>	
<i>Stream</i>		60
漢川縣 Han-chuen heen	繫馬口 Yih-ma-kow <i>t</i>	30
<i>Stream</i>		
涇口塘 Yuen-kow-tang		
新溝 Sin-kow <i>t</i>		
	蔡甸 Tsae-teen <i>t</i>	60
	赤野湖水 Chih-yay-hoo-shawuy	60
拖路口 T'o-loo-kow <i>v</i>		
三里河 San-le-ho		30
漢口 Han-kow <i>t</i>		30
Ching-too to Hankow		4514
Seu-chow-foo to Ching-too		940
Hankow to Seu-chow-foo		3525
Total le		8979

The preceding itinerary requires but a few words of explanation, tracing as it does with considerable minuteness, one of the principal routes through western China;—a route, destined it may be hoped, ere long to be numbered among the highways of commerce, opened up by the civilizing agency of foreign aggression. All honour to Captain Blakiston, who, with his party were the pioneers in this department, and has furnished an excellent chart of the great river, with a remarkably accurate description of the country. The above table is intended to supplement his labours, by giving the native names of the places on the way. In the portion of the journey performed by water, the names are disposed in two columns, according as they happen to be on either side of the river; those on the right bank being placed in the right hand column, and per contra in the left. The names by which Captain Blakiston has designated them, as far as they go, are put against the native names. The distances given in miles are from the same authority. The distances in Chinese *le* are for the greater part taken from a native itinerary, the 示我周行 *She go chow hing*, published in 1694; but for part of the land journey where this authority fails, they are noted from the statements of the natives at each place. At best they are but a rough approximation to the real distances, and cannot be relied on where accuracy is a desideratum.

The names given altogether in italics, are watercourses.

A name ending with the syllable *fou* is a prefectural city.

The final syllable *chow* indicates a departmental city.

The final *keen* marks a district city.

The letter *t* following a name, implies that it is a town.

The letter *v* marks a village.

ha is a hamlet.

h is a hill or hills.

i is an island.

ô indicates a place on the bank where there is no assemblage of houses.

Gorges, rapids and islands are placed between the two columns.

The final word *hea* implies a gorge or a narrow.

Tan signifies a rapid.

Pa is a bank, generally an island, but sometimes connected with the land

Chow is a low flat island.

NOTES BY THE WAY.

A glance at the map of Hoo-pih province must strike one with the vast amount of water surface in the valley of the Yang-tsze; and more especially in that portion lying between Hankow and King-chow. Apart from the Tung-ting, the central and largest lake in China, there are some tens of others large and small. Geology tells us that in former ages this was the bed of the Tung-ting lake; and even within a comparatively modern period, we have evidence of considerable changes in the outline of the water channels. The laconic statement in the ancient "Tribute of Yu," lends confirmatory aid to the conjectures of geology, where five Chinese characters* inform us that as the result of the arch-engineer's labours, "The land in the marsh of Yun became visible, and that of Mung was brought under cultivation;" the Yun being supposed to represent the lake district on the north of the great river, and the Mung that on the south. A recent journey up this river, as far as the capital of Sze-chuen, and shorter expeditions on former occasions, have enabled me to verify some of the changes, noticed in the following remarks.

On the 3rd of April, 1868, I left Hankow in a Hoo-nan boat, in company with the Rev. G. John. Our first evening's halt was at Keuen-kow, a small village at the mouth of a tributary river, one of the principal outlets for an extensive network of water-courses in this profusely-watered region; about fifteen lakes, most of them of respectable size discharging a part of their waters here. The connecting streams pass in their way, the prefectural city of 荊州 *King-chow*, the departmental city of 沔陽 *Meen-yang*, and the district city of 潛江 *Tsien-kiang*. One of the largest of these reservoirs is the 洪澤湖 *Hong-ze-hoo*. Among the lakes mentioned as its contributors is the 白泥湖 *Pih-ne-hoo*, 40 miles in length; and it is noticeable that there is another lake of the same name, on the south side of the river, not far distant. By the ramifications of this stream, two or three weeks may be saved in the journey from Hankow to Sha-she, and such is the course generally adopted.

The following morning our route led us past the Seaou-keun-shan and Ta-keun-shan, two hills on the left bank composed of a kind of sandstone, where coal has been discovered, but not yet

* 雲土夢作又 *Yun t'oo mung tso e.*

opened up. Opposite the latter stands the busy town of Kin-kow on the right; where another stream discharges the outflowings of the 斧頭 *Foo-tow* lake, a sheet of water some 40 or 50 miles in length, extending from the south-east boundary of the Kea-yu district, in a north-eastern direction, absorbing the waters of 咸寧 *Keen-ning* district, and some minor affluents. A little higher up on the same bank is the large village of Hea-sha-hoo "Lower Sand lake," and a few miles beyond, also on the right bank, is another village named Shang-sha-hoo "Upper Sand lake." Now one of the feeders of the Ch'ih-yay on the north side is named the 沙湖 *Sha hoo* "Sand lake." Are we to suppose then that these are traditions of the period, when the waters had not yet subsided to their present level—when the Sand lake stretched across the present bed of the river,—when the Pih-ne lakes now lying on opposite sides of the river, were united in one extended sheet,—when the town of Sha-she was actually a market held on a sand flat, and the present provincial city of 長沙 *Chang-sha* really marked the site of an extensive sandbank?

Some few miles above Ta-keun hill is the Sha-maou shan, on the same bank, where a rock is said to have projected from the river, named the 白人磯 *Pih-jin ke*, but has now disappeared. Three or four miles above this, the river makes a sharp turn in a northerly direction, at the commencement of the loop known as Farmer Bend. The sandy point at this turning is named 梅灘洲 *Mei-tan chow*, implying that though now it forms the left bank, yet at one time it was an island in the stream. This supposition is favoured by the fact that a long village named Tung-keang naou, with an extension of detached houses for a considerable distance, runs in an oblique line, about two or three miles back, cutting off a large corner of the present left bank, and marking as it were the former boundary of the river. This is further confirmed by the outline of the river in native maps. Having spent a day at the village of Ta-tsny near this point, we had an opportunity of noticing the configuration of the ground in the neighbourhood. A walk of two miles across the narrow neck of land on the opposite side of the river, took us to the upper end of the bend, nearly thirty miles distance, and a day's journey by water. This neck was crossed by Captain Blakiston in his boat on the 27th of June, but when we were there on April 5th, the surface of the river was near twenty feet below the general level of the peninsula. A high broad embankment runs across, to prevent the water

extending to the southward at the time of the rise. Notwithstanding this precaution however, I was told at the other end of the bend, that for the last three years the land had been inundated.

At the western side of the bend we come to a very large sand spit running out from the right bank in a kind of curve, and hence named the 牛角尖 *Neu-k'ü-tseen* "Cow's horn point;" which threatens soon to add a large portion to the cultivable land on that side. Nearly opposite this on the left bank, at the village of Sin-tan kow, facing the upper end of Ashby Island, is another outlet for the lake waters of the Meen-yang department. A short distance beyond on the right, the town of Pae-chow stands about a mile in from the bank, with a suburb down to the river side. A few miles south east from this, the village of Seaou-lin wan, with a custom house and a busy retail trade, stands at the mouth of the Pih-ho, a small stream on the left. Nine miles higher up on the right, the district city of Kea-yu is prettily situated under the shelter of some small hills, a little way back from the bank. It was scarcely visible from the farther side of the river. On a former occasion when I visited this city, on August 12th, 1864, it was partly under water; our boat ran close up to the gate, and it was necessary to enter by a ladder over the city wall. Formerly there was a creek on the west of the city, connected with a small lake to the south west, but if it now exists, it must have dwindled down to imperceptible dimensions.*

At the village of Luh-ke kow † on the same bank, is the mouth of the 陸 *Luh* river, a stream of some considerable length which rises to the south, from three sources among the 大湖 *Ta-hoo* hills, in the department of 寧 *Ning*, in the province of Keang-se, traversing a mountainous region, passing in its course the district cities of 通城 *T'ung-ching* 崇陽 *Tsung-yang* and 蒲圻 *Poo-ke*, and absorbing a number of tributaries.

Early on the 8th we were abreast of Shih-t'ow-k'ow, a village nestling under the west side of a low hill, which runs out into the river in a bluff. A creek discharging here, is connected with the 黃介湖 *Hwang-keae-hoo*, a lake about 35 miles long, bearing south-west. The principal sources of this lake rise in the 大嶺

* It is not marked on the Admiralty map, but we find two outlets several miles to the east.

† The old name of this village was 陸口 *Luh-kow*.

Ta-ling hills on the south, and 龍魚 *Lung-yu* hills on the south-east. At the south-western extremity it is connected with the Pih-ne, a lake 24 miles in length.

About midday we passed Sin-te, a town on the left bank, of considerable size and much traffic. The general outline is in the form of a Greek P, a canal from the interior running up the centre which does not communicate with the Yang-tsze. A sandy island some miles long lay between us and the town, but I had already been through it on a former occasion. The right bank now assumes a more picturesque aspect; a range of high hills in the back ground, and some spurs extending down to the river, the greater part covered with verdure. Later in the day we passed the village of *Lo-shan*,* "Spiral hill," on the left, where a great assemblage of boats were collected in a creek. At night we anchored at Yang-ling-ke a village on the left, picturesquely situated in the face of a rocky bank. A solitary rock in the river gives name to the place, "Rock of the Yang tombs," and is being rapidly worn down by the water. A temple stands on the edge of a high cliff here, and is supposed to exercise an important influence over the destinies of the river and its navigators. By the time we had been anchored about an hour, a deputation of three Buddhist priests from this temple waited on us according to custom with a subscription book of huge dimensions. As a class there are perhaps no more rigid believers in China, in the power of the idols than the boatmen, and none more strict in their devotions. All along the river the shrines to the protecting divinities of the stream are very numerous, but none enjoys a reputation equal to 王耶 Wang-yay. Every city and almost every village of any tolerable size, has its temple to Wang-yay, designated 紫雲宮 *Tsze yun kung* "The palace of the purple cloud." The origin of this Wang-yay is not very clear, nor could I ascertain to what era he belonged. The name of his temple however indicates a Taouist source, and it is doubtless one of the inventions of that sect, but Buddhist priests are found ministering at his shrine more frequently than any other. Mr. John fished up the information among the natives, that Wang-yay was a child or a boy who was sacrificed by his mother, in order to save his grandmother. When the old lady partook unconsciously of some soup made from the body of her grandson, she revived

* The itineraries give the name of this place 白羅山 *Pih lo shan*.

from a mortal sickness;—so goes the tale, and such is a purely Chinese development of the doctrine of filial piety.

The following morning we soon reached the village of Pih-lo sze,* marked by a rather conspicuous square turret-like structure of two stories, the lower containing a niche for the worship of the local lares, profusely adorned with votive tablets and other offerings. At the other end of the village, a bold rock projects its rugged prominence into the river, and is being rapidly worn down by the weather and force of the current. This forms the end of a hill known as *Sze-tsze shan*, "Lion hill," with a temple on its summit. The long street and chief part of the village is hid behind this hill. A good deal of timber was being landed in the neighbourhood, from the district of Chang-tih, west of the Tung-ting lake. A pagoda now appears on the south bank at some distance from the river, pointing out the site of the district city of Lin-seang; a few miles beyond which a creek communicates with the 松陽 *Sung-yang*, a small lake at no great distance inland.

Early in the afternoon we arrived at the point of confluence of the two streams that unite to form the lower Yang-tsze; the southernmost leading to Yo-chow and the Tung-ting lake; the northernmost forming the main trunk of the river upwards. On the left bank just opposite the junction stands the village of *King-ho-k'ow*, i. e. (not the "Mouth of the Golden river" as Captain Blakiston translates it, but the) "Mouth of the King river," King being the name of this tract of country in ancient times. Here I may remark, that although I have used the name Yang-tsze for this river, in accordance with established custom among Europeans, yet this name is scarcely known among the natives so high up even as Nanking, where the common appellation is the 長江 *Chang-keang*, "Long river." The only general name of the river throughout its whole length is the 大江 *Ta keang*, "Great river," or *par excellence* the 江 *Keang*, "River;" but many sections of it receive special names from the natives, according to the regions through which it passes. Thus 揚子 *Yang-tsze* is a tradition of the ancient state of Yang, so written, and has nothing whatever to do with the "Son of the ocean," † a

* In the itineraries this is named 白鹿磯 *Pih loh ke*.

† The error has arisen from the fact that the natives often incorrectly write 洋子江 *Yang tsze keang*, using one character for another of the same sound, although a very different meaning.

name as incorrect for a translation as it is unphilosophical and in consequence unpoetical. From King-ho kow to the city of King-chow it is called the King river, and so on. Half a mile or so behind the last named village is a much larger one named 觀音洲 *Kwan-yin chow*, implying the existence of an island in this neighbourhood at some previous period.

To the mere pleasure seeker who has no ulterior object, we now enter a region perhaps the least attractive on the whole course of the Yang-tsze. For nearly two hundred miles, a mud flat is slightly relieved by the "Camels hump" range and the small isolated cluster of hills at the district city of Shih-show; besides which the general level is unbroken, save by occasional hills at considerable distances on either side of the river. Even here however, the student of nature and the scientific observer will not fail to add some crumbs to his already accumulated store of facts. Few spots probably could afford a clearer and readier illustration of the secular changes that are taking place in large rivers all the world over. Tediously wending our way along the very tortuous bends, we were daily and hourly witnesses of the rapid alteration the banks were undergoing. A succession of huge masses of loosely-knit material were being precipitated from one side, dissolved in the current, and deposited on the shallow slopes at some lower parts of the river. In walking along the higher banks, one constantly comes to recently well-trodden footpaths, with huge intervals, where a portion of the soil has taken its departure for a more eastern meridian; and the premonitory cracks, sometimes reaching far into the fields, warn the pedestrian of the advisability of giving a wide berth to the avaricious stream. I observed some slips of near half an acre extent, the whole of which would doubtless be washed away by the high water during the summer. The ends of old embankments are occasionally met with, dropping inch by inch into the water,—embankments which had probably been built at a considerable distance back from the river, to defend the adjacent country from the dangers of the flood. New embankments are being built for many miles extent, and generally about a quarter of a mile distant from the present channel. These are massive structures of earthwork, in some places from twelve to twenty feet high, and probably thirty yards thick at the base. Necessity has compelled the raising of many of the old embankments higher. It is curious to observe in a number of places, how low

the country lies inside the old embankments, even compared with the land between that and the river, which has been gradually raised by a succession of periodical deposits, to its present level. In many spots where the element has encroached on the sepulchral domains of the natives, the ancestral relics have been carefully removed, and the funebral trees either cut down or uprooted; while in others, where it may be there are no surviving descendants, the coffins are left to protrude from the perpendicular bank; calling^a to mind the cliff at the old English church of the Reculvers in Kent, to any one who has seen it.

Seventeen miles from the junction of the waters, the considerable town^f of Sze-pa-kow is apparently of recent growth, as it is not mentioned in the itineraries; which give the name of 唐家洲 *T'ang-kea chow*, "Island of the Tang family," instead; but there is no island there now. There is mention also of a stream entering on the right bank hereabout, which uniting with the 禮 *Le* river, discharged into the Tung-ting lake.

The next station on the itinerary is Wa-tsze wan "Tile Bend," but the town of Wa-tsze* now stands more than a mile inland from the right bank. The number of young litters in this neighbourhood reminded us forcibly of Captain Blakiston's adventure in search of a dinner, about the same part, when the gallant officer and his comrades got outwitted by a Chinese pig.

Ten miles above this we reached *Hea chay wan* "Lower chain-pump bend," a busy town marked by a small pagoda on the left bank. This consists of two long streets, one parallel with the river, and another branching out from it backwards. Some three or four miles beyond is *Shang chay wan* "Upper chain-pump bend," of much greater extent than the other. The next station given in the itinerary is the district city of 監利 *Keen le*; but this lies two or three miles from the river, approachable only by land, and we were not within sight of it.

About twenty seven miles higher is Teaou-heen, a small town with a custom house on the right bank. This stands on both sides of a stream leading to the district city of 華容 *Hwa-yung*

* In the 水經 *Shwuy king* "Water classic," a work of the 3rd century A.D. the river is said to pass south of 竹哇 *Chüh hwuy* the "Bamboo plantation," somewhere about this part. By analogy the second character *hwuy* should have been originally pronounced *wa*. Is it possible that this has become superseded by the character *wa* for a tile? Without further evidence this is too slender to build upon, but it looks very probable.

and the Tung-ting lake. There is a great traffic in reeds, in this part of the river where they grow very profusely, ten feet high and more. They are used largely for fuel; also for fences, roofing houses, and even for the walls and other purposes. Agriculture is the chief employment of the inhabitants, but everything wears a patriarchal character. Buffalo carts of a primitive stamp are common, with very high wheels cut out of solid planks, about an inch and half thick, bound by an iron tire. The principal crops we observed were wheat, beans, the vegetable-oil plant and barley, the latter of which was in the ear. Rice and millet were being exported to markets up the river. From Teaou-heen to the district city of Shih-show, there appears to be a greater change in the course of the river than in any other part. The extended tortuous windings of Atalante Bend, would seem to be a comparatively recent channel, as the 水道提綱 *Shwuy taou te kang*, a work of last century, on the rivers of China, describes the course as being eastward as far as Teaou-heen, remarking on the existence of a sandy island; and the itineraries give the distance as 40 *le*, while the distance by the bend according to actual measurement is about three times that number, or 38 miles. A view of the country from the top of any of the Shih-show hills goes far to strengthen this opinion. The numerous lagoons give the district the appearance of being still almost under water, and one can easily believe they are but the vestiges of a channel which has been choked up at no very remote period. If indeed the changes we have witnessed from day to day, proceed with such obvious rapidity, one is constrained to imagine that during a course of years, the alteration must be very great. Probably a minute survey of the adjoining districts would confirm such a suspicion. A comparison of the maps executed by the scientific Jesuits nearly two centuries back, shews a great deviation in the present course of the Yang-tze; and I may remark that the detailed descriptions given in native works, agree very closely with those maps, which were published by imperial authority.

The Shih-show hills however retain a fixed position in reference to the channel, forming a natural turning point in its course; for we know from the Shwuy-king that for sixteen centuries at least, there has been no variation in this respect, but that at the remotest period of that limit as now, the river received a check and flowed past these hills on the north side. The city lies as it were cradled between three principal hills, the wall running

partially up the side of the northernmost, on the top of which is a Taoist temple to the deity of the 東嶽 *Tung yǒ*, "Eastern mountain." A higher hill on the south side has a more imposing structure in honour of the deity of the 南嶽 *Nan yǒ* or "Southern mountain."* The third hill consisting of three peaks, is called 筆架山 *Peih kea shan*, "Pencil stand hill," from its supposed resemblance to that article. The city presents no great commercial activity, and the walls are in a ruinous state; but a busy suburb nearly two miles long, runs along the river side westward. On the opposite side of the river just past Skipper point, is the village of Yang-fa naou. Being detained at anchor there waiting for the weather, while walking along the shore, some people called my attention to a natural curiosity. On going down to the water's edge, opposite the eastern end of the village, an urchin began scraping in the mud, and having almost immediately struck upon the spot, a lighted paper was applied, when a bright flame sprang up and burned briskly, till it was extinguished by throwing mud over the aperture. Just against our boat also we observed a continuous bubbling in the water. Do not these jets of gas betray the presence of coals below?

About midday of the 21st we passed the town of Sin-ch'ang on the left, some 17 miles from Shih-show, and anchored for the night at the town of Ho-heue a larger and very busy place. The intense and unwonted excitement among the natives, to see a foreigner, indicated the rarity of such an event. Here and at two other places where there are sharp turns in the river, the bank is lined with a level facing of hewn limestone, at an angle of about 40 to 50 degrees, serving as a kind of breakwater. The work has been in progress for some tens of years, and is not yet completed.

At an early hour on the 23rd we reached the large and important town of Sha-she, and could not fail to be struck with the dense assemblage of junks, and the various indications of a flourishing trade. The explanation of this is found in the fact

* From the remotest antiquity four mountains have been distinguished in China, as of peculiar sanctity. These are approximately disposed towards the four cardinal points. The Taoists have added another marking the centre, and annexed the whole five to their mythology. The "Eastern mountain" spoken of here is T'ao-shan in Shantung, and the "Southern mountain" is H'ang-shan in Hoo-nan, the reputed site of the famous Yu tablet.

of Sha-she being a centre of confluence for a number of great lines of traffic; the whole length of the Yang-tsze upwards, bringing down the material wealth of Sze-chuen and Hoo-pih; the T'ae-ping canal, a few miles distant on the right, forming the usual route to the Tung-ting lake; and the products of the various large cities and towns on the Tseu and Chang rivers, unitedly entering the Yang-tsze, only three or four miles to the west. Most of these finding their natural terminus at Sha-she, the merchandise is transhipped and conveyed eastward to Hankow and other places by the inner lakes; while but a comparatively small portion continue the voyage by the channel we had come up. The trade of the place having been described by abler hands, I shall not attempt anything under that head. The most striking object in the outline of the place is of course the pagoda. To reach the entrance, it is necessary to descend a flight of steps to an open area, about eight feet below the general level; and as it is scarcely probable that it would be built so low, the fair inference is that the ground around has been raised to that height. By an inscription on the front, we learn that it is called 萬壽寶塔 *Wan shou paou tā* "Myriad years pagoda," and the erection is attributed to 獻 Heen the king of 湘 Seang, a son of the founder of the Ming dynasty. This prince held his court in the adjoining city of King-chow, and having set fire to his palace, he perished in the flames, in 1398. In general features, this resembles most other pagodas in China. Inside the ground story is a gigantic gilt figure, and numerous inscriptions on the wall. The greater part of the inside, which is ascended by a spiral staircase, is faced with large bricks, each bearing a figure of Buddha in bas-relief, with inscriptions recording the generosity of benefactors. Some are stated to have given a hundred bricks to the building, and some probably gave more; while the great majority are under that sum, and the donors of one brick are very numerous. Nearly all these records are in Chinese, but I observed a few also in the Tibetan character. The structure is in good repair, and the view from the top very extensive on a clear day. Immediately beyond the pagoda on a projecting point, stands a cast iron figure, representing some nondescript animal of the bovine tribe, named the 仙牛 *Seen neu* "Fairy ox." A similar figure stands on another jutting point, some mile and half higher up; the inlying curve between the two being named Urh-ke-t'ow wan "Two rocky points bay." We observed several

other iron oxen from the same mould as the preceding, the date being about a century ago; and it appears special importance is attached to their influence as guardians of the river. This is a Taoist device.

On the 24th we started on a visit to King-chow only about three miles distant, and were astonished to find such a fine large city lying down on the low ground out of sight of the river. The walls are in excellent repair, and there is a wide moat of clear water surrounding them. This is the representative of the capital of the ancient region of King, one of the nine parcels into which the Great Yu divided the empire. On entering the south gate, two dirty hands were somewhat unceremoniously laid on our shoulders, and we were told to wait in a miserable lodge till an officer came to question us. When the functionary arrived, his investigations amounted to nothing. During the interview a dense crowd collected round the door, expecting possibly to see us subjected to some ignominy; but it was very amusing to see them disperse, when two petty officials got whips and lashed them right and left. That is the Manchu method of clearing the way. Our inquisitor put a few questions to us, and received some from us in return. He said the city was a camp, and unless we had some business we could not be allowed to enter. As Mr. Medhurst, H. B. M.'s Consul at Hankow, had procured for us a document from the Viceroy, commending us to the protection of all imperial officers, we claimed an entrance to report ourselves to the *Che-heen* or District magistrate, and were admitted on that plea. Contrary to expectation we found handsome busy streets, with the appearance of a prosperous and well-to-do population; but although it is said to be a garrison city, we did not see a single soldier about it. We were told of course that they were at the other end of the town; but we have generally found, where there are troops, a stranger is not left long in doubt as to their presence. Some roughs in the city were disposed to be insulting, but nothing serious came of it. On making our exit from the city, the officer who had examined us, managed to abduct one of our colporteurs in the crowd, and took him inside to question him more closely as to our real character. It appears Mr. John had asked him how many Manchus there were in the city, and he was in a great state of mind to know what could be the object of such a question. There was something droll in taking us for spies. If Chinese spies go about their trade in such a clumsy way, truly they do not shew the

characteristic shrewdness of their countrymen. I mention this little episode, as it was the only intance we met with in all our journey, where the officials shewed any disposition to place an impediment in our way.

Our progress on the 25th was very limited; the wind being so strong that we were obliged to take shelter in the mouth of the Tseu river, alluded to above, a feat which we accomplished at the expense of a disabled rudder. The day became threatening, and in the afternoon a hurricane was apprehended, when it was feared much damage might be done by concussion among the boats. This led to altercation among the boatmen, and in due time words ran so high, that we began to anticipate a general engagement. However, they exhausted themselves in vituperation, and eventually calmed down, as did the weather overhead, without coming to anything serious. The village at the mouth of the river on the east side is named Seaou-ke yaou, where a few gun-boats are stationed. This was formerly a secondary branch of the Tseu river, but is now the more important outlet. The traffic on it is considerable, leading at it does to the busy town of 古麥城 *Koo-mih ching*, at a distance of about fifty or sixty miles; beyond which about 24 miles it passes the district city of 當陽 *Tang-yang*, and about the same distance still higher up, the city of 遠安 *Yuen-gan*, in the northern part of which district it takes its rise at 北風 *Pih-fung* hill. A little below *Koo-mih ching* it joins the 漳 *Chang* river, a branch of nearly equal extent, with several towns on its banks. Not far from our anchorage, a handsome temple has recently been built, to the guardian spirits of these two rivers.

A few miles beyond this on the right bank is the T'ae-ping canal, one of the chief thoroughfares in this part of the country, opening up a direct communication with the Tung-ting lake. This was formerly named the 虎渡 *Hoo-t'oo* river, a designation which was changed for the present one, I believe by the commander 向榮 *Heang-yung*, when he passed this way to suppress the recent rebellion. Having traversed the channel in the autumn of 1864, I found abundance of water for vessels. The only city on the banks is 安鄉 *Gan-heang* district, but there are a good many towns and villages, some of which I found in great disorder from recent inundation. The passage occupied about three days. On the present occasion we learned that it had scarcely been a month navigable when we passed.

A short distance higher up is a large indentation on the right bank, where a stream enters connecting with the T'ae-ping canal. About five miles above that we found a very large sand deposit in the middle of the river,* leaving a narrow channel on each side. The sand-bank was then nearly covered with water.

The same afternoon we reached the town of Keang-kow on the left, where there is a considerable trade in cotton. The original mouth of the Tseu river enters the Yang-tsze at the west end of the town, but this has now dwindled down to less importance than the branch passing King-chow.

A little before reaching Keang-kow in the ascent, the river divides into two branches, forming a large island above thirty miles long, named *Pih-le chow*, "Hundred *le* island." Proceeding by the southern branch, we arrive at the district city of 松滋 *Sung-tsze*,† towards the upper end of the reach. This now lies about a mile in from the river, and is a place of very little life.

On the present occasion however we passed up the northern, which is the most frequented channel, and in the forenoon of the 29th reached the town of Tung-she, a tolerable-sized place. A prominent red structure stands on the elevated bank just before reaching the town. This is the 水府廟 *Shwry-foomeaou*, a temple supposed to exercise an influence over the destinies of the river. Just beyond this we were ferried over a creek by some Buddhist priests, who maintain the monopoly of this branch of industry, as a source of their revenue. This stream, the *Ma-naou ho* "Cornelian river," rises from two sources at the 玉泉 *Yuh-tseuen* hill in the south-west part of Tang-yang district, and another more to the south-west, making a course of near fifty miles.‡ On the western bank of this stream stands the 萬壽宮 *Wan-show kung*, or Keang-se guildhouse, the handsomest building in the town.

* The itineraries give the name 龍洲 *Lung-chow*, "Dragon island," somewhere in this neighbourhood; but I do not know if it refers to this or not.

† Readers of Huc will remember the fascinating picture he gives of a paternal mandarin at this place.

‡ There is a good deal of difficulty in adjusting the watercourses as they stand hereabout with the old accounts. The *Shwry taou te kang* says the Ma-naou river entered the Yang-tsze to the south of Sung-tsze district, but it says nothing about the northern channel by Keang-kow and Tung-she. Has the course of the Ma-naou since altered, or is part of it absorbed in the newly-made channel of the Yang-tsze?

The country now assumes a different aspect; soon after passing Spring island, we get fairly beyond the limits of the alluvial plain. A long range of hills appear on the right bank; and as we advance, more distant and loftier peaks continue to come in view.

On the evening of the 29th, we passed the city of Che-keang, a miserable kind of a place, the wall facing the river having been completely destroyed by an extraordinary rise in the water a few years since. What little business there is seems to be chiefly confined to the suburb, the city being almost deserted. There is one long straggling street inside, mostly occupied by small retail shops; but the greater part of the enclosure is fields with some pretty plantations.

Shortly after we stopped for the night, opposite E-too pagoda, or as it is named by Blakiston "Bush pagoda;" but the distinctive bush which grew so picturesquely from the top corner, and by which I had recognized it on former occasions, is now no more; some rude hand, more concerned for the security of the building than its pictorial aspect, having removed this singular appendage. The hills along the banks are all carefully cultivated, except in inaccessible places; and indeed the same remark will apply for the whole extent of our journey. A double range of much higher hills behind, are named by Blakiston, the "Mountains of the seven gates." We could not after all our inquiries learn where he got this name from. He gives as the Chinese equivalent, "Shih-urh pei," but we were utterly unable to trace any connection between the Chinese name and the translation. Some ten miles higher up the river is a spot called the *Shih-urh pei*, "Twelve backs;" "back"* being a name given to a kind of perpendicular convex cliff.

In the forenoon of May 1st, we passed the district city of E-too, just round a headland facing north-west. It is agreeably situated on the declivity of a hill, at the mouth of the *Tsing keang*,† "Clear river," the water of which is of a bright bluish green colour, and contrasts strangely with the sombre muddy hue of the Yang-tsze where they unite to mingle. The city must derive much of its importance from its connection with this river, bearing as it does the principal traffic of 施南 *She-nan* prefecture. Rising near the north-west boundary of that prefecture, and with a number of

* In old works the name is written 背 *Pei*.

† The ancient name of this river was the 夷水 *E-shwuy*.

important tributaries, passing within easy distance of the district cities 利川 *Le-chuen*, 恩施 *Gan-she*, 宣恩 *Seuen-gan*, 建始 *Keen-che*, 長樂 *Chang-lo*, and 長陽 *Chang-yang*, it drains the watersheds of these mountain districts, and disembogues after a distance of 200 miles in its greatest length; running underground for some miles in the upper part of its course.

The following morning, we reached a narrow pass in the river, between two bluffs, where the force of the current is so strong, that it is almost impossible to get through without a favourable wind. A series of bold headlands on the right bank, formed of conglomerate, rising perpendicularly from the river, to the height of a hundred feet or more, are known as the "Twelve backs"* referred to above. If the passenger is on the look out there, he will get a glimpse for two or three minutes of the remarkable natural arch, figured in Blakiston's book, p. 161. This like all similar formations is called by the natives 仙人橋 *Seen-jin keaou* "Fairy bridge," and forms a very striking object in the scene. A flight of narrow steps is cut in the face of one of the cliffs, connected with a horizontal path and descending flight at the other end; but the whole is so much worn down by the water, that it appears difficult now to get a foothold. Holes in the rock are pointed out, to which it is said chains were attached for the passenger to hold on by. This bears the appearance of great antiquity, and local tradition ascribes the work to Choo-ko Leang, the hero of the *San kwo* or "Three states," in the 3rd century of our era. On the opposite cliff there are still chains, by which small boats are pulled up; and a little above this, the face of the rocks was covered with a bright yellow flower, a very pretty sight.

A short distance beyond this on the left, at the village of Tsin-kea-teen,† the Lin-keang river makes its exit, after a tortuous course of several tens of miles from its triple source among the hills to the north.

* 陸游 *Luh Yew* a native scholar who passed up this river in 1170, has the following note in his private journal, under date 10 month, 6 day.—"Passed the "twelve backs" of King-mun (gate of King), tall and overhanging like so many huge walls, towering precipitous cliffs to the verge of the summit; this may be classed among the wild scenery of the gorges." (入蜀記 *Juh shuh ke*, Book 6).

† This is called 臨江市 *Lin-keang she* in the itineraries.

Early the same afternoon we reached the prefectural city of E-chang,* a place specially distinguished by its great gathering of boats, of various forms and all sizes; and we soon came to an anchor in the densest of the throng. The city within the walls is rather small for its rank, but there are extensive suburbs along the river bank for several miles, with a busy traffic. Opposite the city is an island Se-pa, about three or four miles long, on which has sprung up a large town, forming a very important addition to the settlement. A large conflagration had recently made a great gap among the houses outside the east gate, which they had scarcely yet begun to rebuild. Down by the river side were a vast number of temporary sheds, made of bamboo framing and covered with mats; mostly occupied by dealers in comestibles. These are deposited year by year as the winter approaches, and are removed by degrees as they get invaded by the rising waters in summer. Having now reached the terminus to which our boat was engaged, our first care on arriving was to secure the means of continuing our journey. When at Sha-she, we were told that that was the best place to engage a boat for Sze-chuen; but fortunately did not yield to the advice. Had we done so, we should assuredly have fared worse. E-chang is doubtless the place to hire passenger boats for going up the river. There is a good choice, and no hesitation on the part of the owners to let them to foreigners. The up-river boats may be generally divided into two classes;—cargo boats and passenger boats. The former have broad roomy holds, and are covered with a mat roof. They may be engaged at lower rates, and might be put up with in winter time; but in the heat of summer, they would scarcely be safe for Europeans to take a long voyage in. The passenger boats, termed 跨子 *K'wa-tsze* are much more commodious and airy; but both kinds are of an exceedingly flimsy build, and constant baling out of the water in the hold seems to be the rule. We soon succeeded in engaging a small *k'wa-tsze* to take us to Ching-too, the peculiar form of which may justify a few words of description. The hull was about 40 feet long and 8 feet wide in the middle, drawing about a foot and half of water; fifteen feet of the fore-deck was left uncovered for the rowers, a division being opened in the middle, for a *cuisine*;

* This was formerly a departmental city, with the name 彝陵 *E-ling*, dependant on the prefecture of King-chow. The present name of the district is 東湖 *Tung-hoo*.

and it was only on rare occasions that the cook left this stronghold. The centre of the boat was covered by a square-built housing, 16 feet in length, divided by moveable bulk-heads, into three compartments 5 feet 8 inches high, airy and well-lighted. The after one we removed to form our dormitory, while the smaller chamber served as sitting room and reception hall. A small house on the stern formed the domicile of the skipper and his family; above which a niche contained the domestic shrine. An intervening space of some four or five feet was occupied by the steersman and various domestic arrangements. A large light sail was fastened to a cross yard at the top of the mast, having a stout bamboo fixed to the lower edge, with a crooked handle attached, by means of which the sail can be furled in three or four seconds, and let down in half that time. An extraordinary kind of scull lay over the bows, more like a mast in size and shape; and its duty seemed to be to supplement the power of the helm. The butt end was bound about with a stout rope, in such a manner that several of the crew could get hold of it to guide it. We had agreed for a crew of eighteen men, but found when fairly off, that reckoning the skipper, his wife and a child of 4 years old as three, we could only make up seventeen in all. However with these we managed very well. After a detention of three days at E-chang, during which we thoroughly visited every part of the city, and rambled over the opposite shore, we started again on the evening of the 5th, and crossed over to the western channel, the eastern being too shallow yet for boats of our size.

Our first sensation on moving was one of uneasiness, on account of the unsteady oscillating motion of our new vessel, so different from the steady-going Hoo-nan craft we had just parted with; however such is custom, we soon got to feel wonderfully secure, notwithstanding the eccentric motions we had to experience. The current runs strong here and the slip in crossing is very considerable. Facing the city is a village on the right bank, at the mouth of the Taou-hwa-poo shwuy, a small stream running in from the west. This is the spot pointed out by Blakiston, as a suitable site for a European settlement. The first two miles upwards is an abrupt rocky cliff, composed of intermediate horizontal strata of sandstone and conglomerate; along which the boatmen track wherever it is possible to get a foothold, sometimes thirty or forty feet above the water. At other places one of the crew strips, plunges into the water, and carries the

bamboo towing-line to some point of rock round which he can fasten it, and then all hands pull up by this line. Where more effective means of propulsion are not available, eight or ten of the crew ply the oars in concert, the stroke oar singing time in a monotonous unmusical tone, with which the others chime in. Other devices are at hand where these fail, and so by one means and another every obstacle is overcome. A kind of coxswain or chief mate stands at the head of the boat, poling, guiding, encouraging and giving orders in a good-natured kind of way. This is a very important personage in the boat. Another man is stationed on the roof, almost constantly coiling up the lines or paying out. In fact nearly everything is different from the down-river navigation. On halting for the night a cock was sacrificed, and the remarkable bowsweep duly smeared with the blood, to secure a prosperous voyage.*

By about 8 A.M. on the 6th we were round Musselman Point, opposite which on the left stands the small village of Nan-tsin kwan,† just at the entrance of E-chang gorge.‡ A little to the east is the mouth of the Leang-tsun ho, a river which rises at a considerable distance among the hills to the north, and receives two accessories in its course. The weather was fine, but there was a cold air in the gorge in the early part of the day. After proceeding a mile or two we got a favourable wind, by the aid of which we made good progress. The narrowing of the river at the entrance of the pass is something remarkable; and the width continues to diminish till about the middle, where it is scarcely above a stone's throw. At first the high cliffs are only on the right bank; but the left gradually increases in abruptness till the two sides are equally precipitous, rising in some places to four or five hundred feet, and worn into the most picturesque forms. At times the fancy is fain to trace the remains of some stupendous cathedral in the ever-varying figures, or the turrets

* In the *Shwuy taou te hung*, this part of the river is called the 大石灘 *Tah-shih tan* "Great stone rapid," and E-ling is said to be at the mouth of the gorge, while nothing is said about a second channel. It appears probable that if the inner channel existed then, it was but an insignificant stream; but that subsequent enlargement has drawn off a great portion of the water, thus reducing the flow in the western channel, which is scarcely entitled to the name of a rapid now.

† The *Shwuy taou te hung* calls this entrance the 下牢關 *Hea-laou kwan*.

‡ The name of this gorge in the itineraries is 刑官峽 *Hing-kwan hea*.

of an ancient baronial castle, perched on the summit of an overhanging precipice. Again we find a cave with intricate passages, worn out by the hand of time and the agency of the elements. Terraces and ledges abound covered with vegetation; and frequent chasms and ravines, down which cascades pour their contents into the insatiable river.* About the middle of the gorge is a custom-house establishment on the right bank, at a level spot, called Ping-shen pa, but we were allowed to proceed without stopping. Towards the upper end of the gorge, a series of gigantic hoary-looking weather-beaten peaks suddenly make their appearance, peering like so many spectres over the line of hills immediately on the river bank, a most singular view. At the west end of the gorge on the left stands the village of Nan-t'ò, against which is a small stream known as the Shang-hung ke. Here we had to cross to the left in order to avoid the force of the current, which is very swift in this place; and as there is a strong eddy near the left bank, should a boat get too low down, the transit is not accomplished without danger.

* Not only does this spot strike a foreigner with wonder. Some of the natives have shewn their appreciation of its beauties. I quote here a descriptive passage from the journal of Luh Yew. On the 8th day of the 11th month he notes. "We started this morning at the end of the 5th watch, and passed the Hea-laou kwan, where a thousand peaks and ten thousand precipices limit the confines of the mighty Keang. On the one side we see them rising abruptly from the base, on the other they stand out in isolated prominence; here is a block on the descent as if about to crush one, there hangs a perilous mass as it were on the point of dropping; in one direction we see a horizontal split, in another is a vertical rent; in one place a protrusion, in another a recess, in another a cleft; singular, curious and inexhaustible are the forms. In early winter the trees and plants are still unfaded, fresh and flourishing. Looking to the westward, hills rise o'er hills in semblance of a portal, from which proceed the waters of the Keang. Thus we learn to appreciate the force of the expression:—"the mountain stream of Hea-laou." (入蜀記 *Jih-shuh ke*. Book 6.) Seven years later, 范成大 Fan Ching-ta, another native who has left his mark in the annals of fame, having passed this spot downwards, at a three months earlier date, records his impressions in his private journal, in something like the following terms:—"Passing the spurious Twelve peaks in our downward course, on all sides pointed summits of stranger aspect come in view; numbers fail to reckon the sum; the artist's pencil is inadequate to portray the magic scene; and no description can equal the reality; surpassingly enchanting and exquisitely grand, the fairy tableau rivals in romance the celebrated mountain group of Woo." (吳船錄 *Woo chuen luh*. Book 2.)

Such was our position; getting too near the whirl, the boatmen lost the control. Round went the head, and the boat lurched heavily to one side, looking very much like a capsized. Scarcely however had we time to congratulate ourselves on getting righted, when down it went as much to the other side, while the boat was at the same time rotating on its centre. This process was repeated while she made two complete revolutions, much to the discomfiture of the passengers at least, if not to the crew. Had it not been for our heavy cargo of book boxes, I believe we could not have stood it. At length however by the aid of the huge bow-sweep, we got through the difficulty; and after getting a mile or two further up, halted for the night near the spot termed by Blakiston the "first rapid on the Yang-tsze," named the 無義灘 *Woo-etan*;* but there was scarcely any rapid at the time we were there.

The character of these currents is continually changing with the rise and fall in the water. Thus where there are strong rapids in the summer, it often happens that in winter there are none, and *vice versa*. A little higher up is the Lo-teen ho, a small stream on the left.

This part of the river is termed the 黃牛峽 *Hwang-new hea* "Yellow ox narrow;" and considerable interest attaches to it in a geological point of view. Here we come suddenly upon a nest of granite boulders, scattered about in most inexplicable order; and the uninitiated is left to wonder at the apparently isolated position of these blocks. The place however, has been visited by R. Pumpelly Esq., and thanks to his able report recently published, we see that this is the only spot along the river, where the lower stratum of granite crops out; and that to the same cause we owe the frequency of rapids in this neighbourhood. Native tradition especially recognizes the hand of the Great Yu here, and tells us that by the miraculous aid of the spirit of the Yellow ox, † he was enabled to remove the huge blocks, and so

* The itineraries give the 大無泥 *Ta-woo-ne* hereabout, which is obviously intended for the same.

† This name carries an allusion to the mountains I have just mentioned, which Blakiston says are about two thousand feet high. The circumstance may be told in a quotation from the journal of Luh Yew, who says:—"They stand like a wind screen towering aloft, tier piled o'er tier abruptly rising till they pierce the heavens. On the fourth tier is the figure of an ox, the colour a reddish yellow; before which stands a man, as it were with a hat on his head. Yesterday and this morning, the top of the mountain

make a passage for the water. On the right bank is the *Hwang-new meau*, "Temple of the Yellow ox," which gives name to the village* where it stands.

Our journey on the 7th was all day through a series of rapids; and with the men hard at work from early dawn till dark, we only made about five miles. This was hard upon the boatmen, but it gave us a good deal of time to spend among the people on shore. An unfortunate boat had fared worse than we in coming up the gorge, having run against a rock and sprung a leak, by which the cargo of cotton had got soaked, and the vessel necessitated to go into dock. Beyond the *Woo-e tan*, we ascended the 虎頭灘 *Hoo-t'ow tan*, 鹿角灘 *Luh-k'ö tan*, and one or two minor rapids, which brought us to the village of *San-tow ping*. Here also is a temple to the Yellow ox. A stream from the south enters the river on the east side of the village.

Just here the river takes a bend, and nearly opposite the village, an island, named 中埧 *Chung pa*, a mile or more long has been formed; on which a few colonists have fixed their residence, depending for a living, chiefly on the supply of provisions, opium, and gambling accommodation to the boatmen. Here the current runs very strong, and just beyond, we came to the 史君 *She-keun* rapid. Our skipper had already come to an understanding with a fellow-craft, that the two crews should unite their force for mutual aid where necessary, till we got through the thick of the rapids. Here however we needed the combined force of three boats, to the number of near fifty trackers. We passed up quite safely, but the line of one of our fellow voyagers broke, and it

was buried in the clouds, and I have only just now seen it for the first time." From Dr. Barton's picture, the range would seem to have been in great part covered with clouds when his party saw it also. We were more fortunate, getting a clear view of the lofty precipices in all their magnificence. *Fan Ching-ta* says in reference to this:—"On the vertical face of a lofty mountain precipice behind the temple, is a yellow figure resembling an ox, and a black figure like a man leading him. This is said to be the Spirit of the place."

* The itineraries give the name of this place 黃陵驛 *Hwang-ling yih*, and add that the rapid here is dangerous, with the precaution to beware of bad characters. On the proclamations the name of the village is written 黃陵鋪 *Hwang-ling poo*. *Luh Yew* notes a curious circumstance at this place, thus:—"Behind the temple are a number of trees resembling the *Ligustrum lucidum*, but not the same, and there is no name for them. When the leaves fall, they have black figures on them, resembling the characters of the Taoist charms, no two leaves being alike." Is there a coincidence here with the famous "Tree of Ten thousand images," seen by Father Huc at Koun boum?

took them an incredibly short space of time to make half a mile down stream; but they managed to haul up again without further damage. This finished the labours of the day, and we came to an anchor.

Scarcely had the first streak of next morning's light dawned upon us, when we were already stemming the billows of another considerable rapid; but the grand performance of the day was to take place at a point known as Pih-tung-tsze which we reached in less than two hours from the time of starting. Here a heap of gigantic granite boulders, forming a bold rocky prominence, juts out into the stream, reducing it nearly one third of its average width; while the numerous blocks of the same material scattered about the bed, give the water the force of a torrent in its impetuous rush. Some nine or ten boats were waiting to be pulled through, and we took our station sixth in rank; the whole forming a scene not a little picturesque. About two hundred natives were on the boulder rocks, standing sitting and squatting on the ledges and points, the greater part half naked and some pure nude. Indeed *sans culottes* is the most distinctive uniform among the Sze-chuen boatmen. Some few of the better clad among the assembly had no doubt come for the sake of the sight, but the greater part were waiting to be employed. The skippers of the boats, one by one went on shore to make arrangements, and gradually the numbers on the rocks thinned down to a minimum. At some distance beyond, a group was observed standing on the sandy beach. A strong bamboo towing line four or five hundred yards long had been passed ashore from the foremost boat, a large cargo junk, which was made fast to a point of rock by a hawser; some sixty or seventy men were attached to the line; a drum on the deck sounded a tattoo as a signal for the men to pull; the hawser was let go, and off went the boat into the boiling current. For some minutes there was no perceptible motion, and so strong was the counterforce that it appeared to take all their towing power to maintain their position. They were moving however inch by inch, but we could not suppress some feeling of anxiety as to the result. The bow-sweep was put in motion to ward them off the rocks, and continuous pulling at length brought them to the head of the rush. The same force still acting in the smoother water above, carried them through with a motion that raised the waves, like the action of a steamer, till the boat was quietly discharged in a small bend of comparatively still water. The next boat was then

tackled on, and the same process was in operation, when the line got entangled on a sunken rock. Forthwith a swimmer dashed into the stream, swam to the spot, and cleared it; when on they went again without further hindrances. After a delay of some two hours it came to our turn, when we got through with no more difficulty than an occasional bump on the rocks. This experience was something new to us, and the novelty and excitement amply compensated the inconvenience and danger; but after being subjected to the same treatment for a month or more day by day, the novelty wore off, and it began to lose much of the interest, which attached to it at the commencement. Another hour or so brought us to the Tǎ-tung* rapid, called by Blakiston the Kwan-dung, where a small rocky island was still seen in the stream, but there was no rapid worth naming, although at some seasons of the year it is said to be formidable. Here, and for some distance higher up, the Yellow ox precipices still make a conspicuous figure in the landscape; a fact which has given rise to the following double distich:—

朝發黃牛

三朝三暮

Chaou fa hwang new,

San chaou san moo,

暮宿黃牛

黃牛如故

Moo sūh hwang new;

Hwang new joo koo.

At morn the Yellow ox is seen,
And still abides the same at e'en;
When day and night glide three times o'er,
The ox is still seen as before.

This was an old saw in the days of Soo Tung-po, who has embodied it in one of his poems.

Two or three miles beyond the Tǎ-tung rapid, the village of Tae-ping ke stands on the right side of a stream of the same name, flowing down a ravine on the left bank. The stream is also known as the Pih-shwuy ke. Scarcely a mile higher up the K'eu-ke water enters on the right bank. A mile or two more brought us to Hih-yae tsze, a village on the left, standing about fifty feet above the water level. Here the San-muh ke, a stream of clear water issues from a ravine. The weather was fine, and throughout the day we had been travelling through magnificent scenery. The ranges of hills on either side, of moderate height, formed quite a picture, from the varied tints of the soil and crops

* The itineraries give the name of this 塔洞 Tǎ-tung, with a note to be careful at the time of high water, and to beware of bad characters.

with which they were covered, being industriously tilled and cultivated to the summits; while much higher and wilder ranges were seen stretching away behind. The beauty of the landscape increased, till we reached the mouth of the *New-han ma-fai*,* or "Ox liver horse lights" gorge; and then we came upon one of the rarest pieces of mountain scenery I have witnessed. Huge peaks are seen towering aloft to the height of between two and three thousand feet; while the cliffs stand on either side like perpendicular walls, broken in parts by ledges covered with vegetation; and in some places houses and small farms are perched in almost inaccessible spots. In parts the opening cannot be much over two hundred yards wide, the contraction giving additional impetus to the swift-flowing current. On the left, at the entrance, is a lower stratum of limestone, inclined at an angle of about 30 degrees from east to west. This stone is in places curiously sculptured by the water, into a congeries of tapering spires, beautifully finished off with a complicated series of delicate mouldings. On reaching a spot where a foothold could be obtained, our trackers made a somewhat perilous ascent of these limestone turrets, scrambling up like so many cats, till they reached a path on a ledge of rock some fifty feet high. A mile or two of tracking thus brought us to a convenient spot on the left bank about the middle of the gorge, where we anchored for the night, against one of those bold rounded perpendicular cliffs termed (*pei*) "backs." Nearly opposite was a curious cave wrought out in the rock, by the continued beating of the water. It goes in farther than the eye can follow, contracting as it recedes, the front rising into a huge gothic arch, with a number of pendants attached to the roof, and a piece projecting forward, very like one of those figures we frequently see protruding from the battlements in gothic architecture.†

* Such is the ordinary name; but it is also known as the 空般 *Kung-ling* gorge; Blakiston names it the Lu-kan gorge; but the old name appears to be the 馬肝 *Ma-han* or "Horse liver" gorge.

† In reference to this gorge, Luh Yew has the following note under date, 12 day of 11 month:—"After passing the 東瀾 *Tung-ling* rapid in the morning, we entered the Ma-kan gorge, where the stone walls rise to a height incalculable. A pendent stone in the form of a liver gives name to the gorge. By the side of this is the Lion precipice, in which a small stone crouching in a gap and covered by green grass, exactly resembles a green lion. The water trickles down from a spring in the rock, but our boat passed so rapidly, that I could not get a drop to taste. It should be a spring of superior quality however."

On moving from our anchorage next morning, the river in front of us appeared to divide into two branches; but on reaching the point of junction, we found the southern opening was a tributary of bright green water, making its way out through a strait and lofty chasm. This was the Hwa-keau water, formed by the junction of three streams to the south. The main stream bears away in a northerly direction; and for some distance up the right bank, we have the canopied rocks overhanging the river, till we gradually emerge among hills of a lower level, but still retaining their abrupt and jagged character, till near the small town of *Sin-tan*, or "New rapid." There is a strong rapid nearly opposite the town, but the worst features of the place are only seen to perfection in the winter season. When the water is low, it is necessary to remove cargo and every heavy article on shore, and pass through with an empty boat. The bad renown of the place is of old standing. During the first three or four centuries of our era, there were two successive mountain slips, when the channel became choked up by the precipitated rocks, and it received its present name at that time. For many centuries the danger and difficulty of the new rapid were borne with as an unavoidable evil; and year by year the number of boats lost and damaged are said to have been incalculable; but it was not till about the year A.D. 1028 that it was determined to put a stop to such a state of things. A public notification was then issued forbidding the navigation of that part of the river, from the 10th month to the 2nd month of the following year. As a principal source of income was thus cut off from the inhabitants, who had depended mainly on the wrecks in their neighbourhood, self-interest prompted the adoption of some new measures. The throne was memorialized by the incumbent magistrate of Kweichow, a batch of quarrymen were set to work at low water in the year A.D. 1050, and at the end of eighty days they had so far succeeded in removing the principal obstructions that from that time the river was again opened to navigation. Luh Yew passing this way 120 years later, complains of the obstacles still to a great extent remaining, and recommends a combined effort during low water in the 12th and 1st months, to clear away the pointed stones, still left in the bed of the channel; but he remarks that so long as the natives have an interest in maintaining the difficulties of the passage, they will of course oppose the thing as impracticable. The only way would be to insist on its being

done. Another cause of accidents he says is through the cupidity of traders in overloading their boats. He suggests that a tablet should be erected in front of the town, engraved in large characters as a warning to passers. Whether the evil has been mitigated since Luh Yew's time I do not know; but it is still the practice to unload and reload boats passing up and down, during four or five months of the winter season.

Immediately above this town is the entrance to the *Ping-shoo paou-keen*, "Military code and precious sword" gorge.* This name bears with it a tradition that the treasures named,—once the property of the famous Choo-ko Leang of the Three states period,—are now deposited in some unapproachable recess in the cliffs of this sombre gorge. Such is merely one of the many evidences we meet with over this region, of the veneration in which this ancient worthy is held. A very powerful current met us in this gorge, but fortunately we got a good wind to carry us through without much trouble. Immediately on emerging from the upper end we find the village of Me-tsang kow on the left bank, at the mouth of the Heang ke, a green stream emerging from the mountains. This unites the waters of three rivers, one of which passes the district city of 興山 *Hing-shan* and makes in its greatest length a flow of nearly a hundred miles. A very remarkable cave the 玉虛洞 *Yuh-her t'ung*, is spoken of about two miles up this river. The entrance is only ten feet wide, but the cave is said to be capable of containing several hundred men. One is struck with the spacious and ornamental interior, as if entering some great palace.† Just past the above-named village I observed the piles of sandstone covered with that black coating which Blakiston speaks of as indicating the proximity of coal; the same occurred at many subsequent places. A

* This is what Blakiston calls the Mi-tan gorge. An old name is the 白狗 *Pih-how*, "White dog" gorge.

† Luh Yew who visited the place, says:—"The natural stone formations represent curtained canopies, streamers, standards, plants, bamboo shoots, immortals, dragons, tigers, birds and beasts; every conceivable form, and the most striking resemblances. But the most singular thing is a stone on the east round like the sun, and another on the west shaped like the half moon. I have been all my life accustomed to see precipices and caverns, but never met with anything to equal this. About the year 1073 謝師厚 *Seay Sze-how* inscribed his name on the lofty precipice. There is also a little history of this cave by 陳堯咨 *Chin Yaou-tsze*, in which he says it was first discovered by some hunters about A.D. 750."

rocky channel for some distance succeeds, and the favourable wind did us good service, in getting us past the *Mi-tan* or "Rice rapid," where the water runs strong. A little distance above on the right is the Maou-ping ke, a stream flowing in from the south-west, having received a smaller affluent from the east. On the west side of this, at a height of nearly a hundred feet above the river, stands the village of Laou-kwei-chow, a single street, with some half-dozen shops. As the name implies however, it was once of greater importance than it is now.

In 1234, when there was an irruption of the Mongol invaders, the district city, then named 秣歸 *Tsze-kwei*, was removed across the river, and fixed on this site. It was subsequently removed to Sin-tan, afterwards to Pih-sha, and ultimately to its present site, about two miles higher up on the left bank, where it has been fixed since the Ming, but the name is now changed to 歸州 *Kwei-chow*. While opposite this city, the wind being quite in our favour for proceeding, no persuasion would induce the skipper to cross over. As the enclosure lies up the incline of the hill, we could see that there was little more than official residences and cultivated fields inside the walls, and a suburb running parallel with the river. About two miles beyond this a small stream enters on the right bank, in the neighbourhood of which we come to a cluster of coal mines in the face of a hill, at various elevations, some scarcely twenty feet above the river and others from one to two hundred feet high. They appear as small quadrangular apertures at the surface, about three or four feet square, and the coal is shot down an inclined plane. A few miles further we stopped in the afternoon, against a village on the left bank named Sëe-tan, a formidable rapid of the same name rushing past it, which took the remainder of the day to ascend. This rapid is also called the 叱灘 *Ch'ih-tan*,* and a stream emerging on the east side of the village is named the 叱溪 *Ch'ih-he*. On the east side of this stream are a number of coal mines in the face of the hill.

Early on the 10th, at a distance of ten miles from the city, we passed the Sha-chin-ke on the right, a stream formed from the junction of two smaller ones flowing in from the south. A few miles beyond this on the same bank, is another stream, which rises from three sources in the south-west of the district of

* In old books the name is given 叱灘 *Ch'a tan*.

Pa-tung, and flows with a general north-easterly course to its embouchure. Not far from this, is a mountain stream on the left bank, which brings down the contents of three small branches, issuing by the straggling village of New-kow, opposite which is a strong rapid of the same name. In the afternoon we passed the district city of Pa-tung; where there is no city wall now, but there probably has been one at some former time. The settlement consists mainly of a street more than a mile long, running parallel with the river. A few miles beyond is the site of the old city on the left bank; but two or three solitary farm houses in the neighbourhood, is all the sign of human habitation now left. The city was removed to its present site about the beginning of the 13th century.

The 11th opened with a heavy rain, a considerable fall having taken place during the night; but it ceased about two hours after daybreak, and as the clouds gradually lifted themselves off the higher peaks, the scene was exquisitely beautiful, and the hills looked much fresher than before; while streamlets in every direction were draining the uplands into the great river, the variety in the colour of the liquids, indicating the nature of the soil through which they flowed. First we had innumerable little rills of a blood red; further on, they came down a light yellow ochre; and these again were succeeded by others of the common muddy hue. At an early hour we passed the village of Se-seang kow, standing on the east side of a ravine on the left bank. This is the entrance to the Yuen-too ho, a river which rises about the north-west border of Pa-tung district, and absorbs three affluents in its course, before reaching the Keang. Somewhat higher is a small stream on the right bank; and at the village of Kwan-too kow on the left, another small stream issues from the north. Here we entered the Woo-shan gorge, known generally by the name *Pih-le hea*, "Hundred le gorge;" and at no great distance, reached the *Ho-yen-shih tan*, "Flint rapid." This takes its name from a most confused heap of blue limestone interspersed with strata and nodules of black chert, the huge masses lying about in such anomalous positions, as would appear to indicate some great natural convulsion. Several places of this kind occur along the right bank; and the limestone we find lying in thick level strata on the face of the hills, covered with a coating of chert, and broken straight off at intervals, in step-like projections, exhibiting the edges, just like the gable ends of some gigantic cathedral, several hundred feet in height.

In many places we find natural caverns, some of which are of curious formation. The action of the water is seen to a height of fifty or sixty feet above the level as we saw it; and by that agency the limestone has been carved out into the most graceful forms and figures. In one place we find an elegantly-shaped alcove, with a miniature cascade issuing from the interior of the mountain; in another, a natural recess has been taken advantage of to deposit some large gilt idol; and the variety of scene as we proceed, is amply sufficient to keep up the interest and rivet the attention.

We had not gone far the following morning, when we halted against a small stream on the right, by the side of which, on a terrace nearly a hundred feet above the river, I saw the first and only bed of green poppies in all our journey. They were still in flower, but the petals were dropping off; so that the season was drawing to a close. In the adjoining prefecture of Kwei-chow, the cultivation was prohibited by the authorities; and by the time we got beyond it, the crop had been all collected. I can only call to mind one bed of the withered plant still in the ground, the juice of which had been already extracted. But there is no doubt of the extensive cultivation of it throughout the province. From all the information we could gather, it commenced in this province within twenty or thirty years past.* I do not remember seeing any foreign opium, but at every market, the farmers bringing in their little lumps of native production, were always to be met with. As far as I could learn the price ranged from 140 to 250 cash the tael weight. If an outsider may venture an opinion, I should say it looked much inferior to the foreign article.

A short distance further we find on a ledge in the cliff on the left, a line of brick wall with a gate, enclosing a number of caverns, probably the entrance to coal mines, though there is no appearance of any person there now. Near this is the *Kin-poen-tan*, "Golden yoke," where a flight of steps is cut in the cliff, and a chain fixed by staples to aid in the ascent. A little beyond this is the *Teth-hwan-tsae*, "Iron coffin" hill, a perpendicular limestone rock, in the face of which may be seen from the opposite side, at a height of some two or three hundred feet, something of an oblong form glittering like glass or metal, and not unlike a chest

* In the native topography of Sze-chuen, published in 1817, which gives a detailed list of the productions of the province, the poppy is not named.

laid in a recess of the rock. This gives name to the hill. Just against this is the *Sin-päng*, "New dawnfall" rapid, where two successive precipitations from the mountain have taken place, one in A.D. 102, and another in A.D. 377. A gigantic mass of rock lying prostrate there, still bears witness to the fact. It is recorded that on the day of the fall, the river ran upwards for more than a hundred *le*, and splashed up several hundred feet high. A little further on we arrived at Peen-yu-ke, a stream on the left bank, marking the boundary between the two provinces of Hoo-pih and Sze-chuen; and about half a mile more brought us to the boundary on the southern side, formed by the Pan-keau-ke, a mountain current running down a narrow rocky gorge. On the Sze-chuen side is the village of Pei-shih, where the people had suffered severely from a tempest a few weeks before. Less than two miles beyond is the Pih-koo-shwuy river, a stream rising among the hills at the northern boundary of 建始 *Keen-che* district in Hoo-pih. On a point of rock at the mouth of this stream is a temple to the 神女 *Shin neu* or "Female genius," but the doors were shut, and I could not see a vestige of a name or inscription of any kind on the building. On the opposite side of the river are some hills of singular forms, called the Twelve peaks of Woo-shan,* but only nine of them are visible from a boat. There is one said to be in form like the character 巫 *Woo*, "Wizard," which gives name to the district.

Traditions are rife regarding these peaks; not a few of them carry their individual legends, and poets and fabulists have found ample material there for the employment of their pencils. To the Female Spirit of the gorge is attributed the greater part of the natural phenomena of the locality. Among her various recorded apparitions, of course there is one to the Great Yu; and a stone altar is pointed out on one of the peaks, where she presented him with a written charm, that enabled him to carry through his labours in this difficult passage. We naturally look upon these fables as

* The names of these are 望霞 *Wang-hea*, "Cloud observing," 翠屏 *Ts'uy-ping*, "Misty screen," 朝雲 *Chaou-yun*, "Morning cloud," 松栂 *Sung-lwan*, "Fir-tree cone," 集仙 *Ts'ih-seen*, "Congregated immortals," 聚鶴 *Tseu-ho*, "Assembled cranes," 淨壇 *Tsing-tan*, "Clean altar," 上昇 *Shang-shing*, "Mounting aloft," 起雲 *K'e-yun*, "Rising cloud," 飛鳳 *Fei-fung*, "Flying phoenix," 登龍 *Tung-lung*, "Ascending dragon," 聖泉 *Shing-seuen*, "Sacred spring."

the vestiges of barbarism, and so they are; but who does not know that some of the most civilized nations of Europe can shew their puerilities equally monstrous, that have found millions of credulous devotees, even within the last half century.

Early in the evening we stopped at Sha-muh seang, a miserable hamlet on the right bank. Although the houses were nearly a hundred feet above the river, it is said that the water sometimes rises to their level. One of the wretched hovels is an opium shop, where I found two of our boatmen regaling. A mass of old building materials and pieces of broken furniture lay scattered about, which they told me was drift saved from the river. Thick limestone strata here lie parallel with the face of the hill, at an angle of about sixty.

The 13th still found us in the gorge, the scenery quite equal to what we had passed for romantic grandeur, a sombre gloom pervading the more precipitous parts. We soon reached a ravine on the right bank, with a village on the east side, where the Kwan-too river enters the Keang. This rises in nearly a westerly direction, and skirting the south side of the gorge range, runs for a considerable distance parallel with the Keang. It is also called the 清溪 *Tsing-he*, and near the mouth is one of the most remarkable natural curiosities in the gorge, which however we had not an opportunity of going to see. The 清水洞 *Tsing-shwuy tung*, a natural cave is said to pass completely under the mountain, with an opening at the other side. When the water is in it, it is impenetrable, on account of the midnight darkness; but in times of drought it was customary to go there to pray for rain. There the river makes a sharp turn in a northerly direction, and a number of rapids and powerful currents for a mile or two, require all the skill of experienced boatmen to pass them. On turning the next bend, bearing more westerly, we observed a little change in the geological features. There was still the limestone with a plentiful distribution of chert, in contact with which we found interstratified beds of red and green sandstone, the same formation distinctly visible on both banks, the bright colours of the separate strata standing out in bold relief. Towards evening we anchored at the district city of Woo-shan, a poor place, most of the business being in the suburb. The temples and other public buildings are above the general appearance of the place. The Ta-ning, a considerable river, enters the Keang on the east of the city. This rises from two sources in the south-west of 竹山 *Chüh-shan*

district in Hoo-pih, enters Woo-shan on the north-east, and flows for 160 *le* under the name of the 東溪 *Tung-ke* river. It is then joined by the 西溪 *Se-ke*, a river that rises on the border of Shen-se to the north-west. Farther south it receives the 後溪 *How-ke*, and passing the district city of Ta-ning on the east, after gathering the waters of some half dozen lesser streams from the west, it unites with the 楊溪 *Yang-ke*, a river rising in Hoo-pih, which also receives a tributary from the north, and makes a course of 200 *le* before its junction. The united stream then flows on for more than a hundred *le* to its embouchure. On the north bank of the How-ke is a place named 監井 *Yen-tsing* "Salt wells," from which we may infer the production of salt in the neighbourhood.

Within the first two miles of our course on the 14th, we passed three rocky islets a few feet above water; the first out towards the middle of the channel; the second much larger, near the left bank; and the third about the size of the first, a little way out in the stream. Rapids as usual occurred at frequent intervals, and at one of these we struck heavily on a rock causing a considerable leak. This did not give the boat people much anxiety, as it seems to be the normal state of things in Sze-chuen; and they soon got the boat sufficiently patched up to go on again; but from that hour, a regular system of baling out commenced. By this means we managed, contrary to my expectation, to get to the end of our journey without any serious inconvenience. Red sandstone hills principally, bordered the river till we reached the mouth of the Fung-seang gorge. The Ta-ke ho, a tolerably wide river, there disembogues into the Keang, after a flow of more than a hundred *le* from the south-west.* A large village named Ta-ke kow stands

* It may be well here to notice a paragraph which I find in Dr. Legge's commentary on the Shoo-king (The Chinese Classics, vol. 3, pt. 1, p. 114), thus;—"Hoo Wei insists also on another stream called the 'E water' (夷水), which took its rise in the present dis. of Woo-San (巫山) of K'wei-chow dep. in Sze-chuen, and after entering King-chow, joined the Keang in the pres. dis. of E-too (宜都), 'as also to be accounted one of the 沱, which engaged the labours of Yu." Dr. Legge seems to commend the judgment of this author; and if the inference in the above paragraph be correct, then in ancient times there was a channel to the south, by which most of the present gorges might be avoided. Is it possible that geological changes have since raised part of the intervening land and cut off the connection? Referring to D'Anville's maps, we find the source of this Ta-ke river within a very short distance of one of the sources of the Tsing-keang or E

on the east side of it, marked by several conspicuous temples. We entered the gorge with a favourable wind, and by dint of vigorous rowing, managed to make very fair headway through the swift-flowing current. The entrance is picturesque, and the cliffs increase in abruptness as we advance; till near the middle, when they rise almost perpendicular on both sides, to the height of about five hundred feet. One peculiar cliff on the left gives name to the gorge (i. e. Bellows), having a number of apertures in the face, through which the wind whistles at times. On a terrace at an elevation of more than a hundred feet, are a number of caverns in the rock, in which some poor people have built their huts. Along the narrowest parts of the gorge, a great number of funnel-shaped large baskets are immersed in the water, and fastened to the rocks with strong ropes, to trap the fish in their downward migrations. Our passage was a continual tacking from side to side; not on account of adverse wind, but to avoid the dangerous currents. An intimate knowledge of the channel here especially is of the utmost importance, as this is probably the most perilous passage in the whole length of the navigable river. Geographically considered it is a point of very great interest, if we look at the immense collection of water concentrated here, from the watersheds of Sze-chuen, Kwei-chow, Yun-nan and Tibet, suddenly compressed into a channel of not more than 150 yards wide, and forming as it does almost the only entrance to that vast region from the east. Anciently it was called the Gate of Tsoo, and the appropriateness of the appellation is obvious at sight. As may be imagined many spots about it are famous in history; and the testimony of the rocks here perpetuates the memory of heroes whom the Chinese delight to honour. Just about dusk we reached a place on the right bank named *Mǎng-leang-te* or "Mǎng Leang's ladder." This refers to a period in the history of the Sung dynasty; Mǎng Leang being a kind of theatrical

water already noticed as disembodying at the city of E-too. If it be, as it no doubt is, a question of supreme importance to avoid the gorges in the upward navigation, surely it is not beyond the skill of modern engineering science, to open up the old path, and thus reduce to an accomplished fact, one of those wonders connected with the name of the Great Yu, which people would then learn to look upon as prophetic myths. One formidable gorge however, the Fung-seang, would still remain; and if it became a question, to cut it off also, then the most probable channel to the west of it would appear to be the Laou-ma ke, which according to the map, comes within twenty miles of another of the head waters of the Tsing-keang.

myth,—first a freebooter, and afterwards an officer in the imperial army. Certain marks are pointed out in the face of the rock, as the places where he fixed a wooden framework, in order to scale the cliff. A very little way beyond, we anchored for the night against a lofty cliff, known as the *F'un-peih tang*, "Plastered hall." This merely designates a part of the cliff that has been rubbed smooth, and an inscription engraved on it, in commemoration of the restoration of the Han, in the first century of our era.

One of the first objects that attracted our attention next morning, when about to emerge from the gorge, was the *Yen-yu tuy*, "Flood beacon," a solitary rock standing in the middle of the channel, just at the mouth of the 瞿塘 *K'eu-tang* gorge, as the river is there called. Native accounts agree in stating this to be composed of a mass of small stones. Some future traveller may be able to decide whether it is conglomerate. In winter time it is said to rise several hundred feet above the river; while at the time of highest flood in summer, the water is some hundred feet above the rock, and it is described as the most dangerous spot in the empire. There is a popular saying of great antiquity, which runs thus:—

灩澦大如象

灩澦大如馬

Yen yu ta joo seang,

Yen yu ta joo ma,

瞿塘不可上

瞿塘不可下

K'eu tang puh ko shang;

K'eu tang puh ko heu.

When the Flood beacon's seen of an elephant's size,
The ascent of the river all prudence decries;
When the Flood beacon's seen the size of a horse,
The attempt to descend is fraught with remorse.

Immediately opposite this on the left bank, is a hill somewhat isolated from the rest, famed as the site of the ancient city of 白帝 *Pih-te*, the "White God,"* some vestiges of which are said to be yet remaining, but we could only see indistinct ruins from the river. The 鐵柱 *T'ieh-choo*, "Iron pillar" river, from the north, here flows into the Keang. The name of this river

* As the legend runs, when this city was first built by 公孫述 *Kung-sun Shuh* of the Han, seeing a white dragon issue from a well, he took it as an omen that the country would revert to the Han, and consequently named it the city of the White God. The seat of the district government was first fixed there about the beginning of the 3rd century, and continued so till about A.D. 1005. About 1245 it was again occupied, and finally abandoned during the Yuen dynasty.

commemorates two iron pillars that were fixed on opposite sides of the Keang here, from which a couple of iron chains were stretched across the river to guard the pass. A mile or two to the west of this, are some salt-springs by the river side, but they are only workable in winter when the water is low. A little further on, and just west of Quai-chow bluff, are still to be seen some traces of the 八陣圖 *Pa-chin-t'oo*, a military stratagem of the renowned Choo-kō Leang.* This was a stone-wall camp representing a particular arrangement of the symbols of the Yih-king, the conception of which has been considered by the natives a paragon of ingenuity. The village there goes by the same name. But time would fail to speak of all the notable objects in this interesting locality.

The city of Kwei-chow stands on the slope of a hill, immediately across a small river, and seems rather poor for a prefecture. A remarkably handsome temple was being erected to Kwan-te the God of War, the retired General 鮑超 Paou Chaou having contributed ten thousand taels towards the structure. This gentleman's name is well known in the history of the recent rebellion. He has been seventeen years in the field against the insurgents, got a wound in his thigh, and has now retired with a princely fortune, to this his native place, where he is building a magnificent mansion, and surrounding himself with the luxuries of the age, which he is delighted to shew to Europeans.

The Ta-jang river rises on the border of Shen-se, and after a south-easterly course of more than three hundred *le*, during which it receives a small tributary on the west, and another from the north, it enters the Keang on the east side of the prefectural city. The name of the district is 奉節 *Fung-tseih*. The distinctive synonymes of the Keang here are 岷江 *Min-keang*, 蜀江 *Shuh-keang*, and 汶江 *Wän-keang*. Father Huc in his witty narrative calls it the Blue river. It is difficult to conjecture what could have led the worthy Abbé to give it this title. During the whole of our journey we could find no trace of any one knowing it by any such name.

The water of the Keu-tang gorge is very apt to produce goitre; and indeed native testimony attributes the same characteristic to

* Two other specimens of this camp existed in after ages; one in the district of Meen in Shen-se, and another in the prefecture of Ching-too in Sze-chuen; but less trace of these has been left even, than the one here spoken of.

the water of the river, for many miles higher up. Good water is got from a spring in the 臥龍 *Go-lung* hill, about three miles from the city.

We had come through the gorge without the slightest accident; but some of our fellow travellers had struck the rocks and done great damage to their cargo. A cotton junk found it necessary to unship their freight at the city, having got completely drenched. Another with European goods was so damaged, that the super-cargo had to abandon it, and hire another at a great expense, to carry the remainder of his cargo, two thirds having been destroyed by the wet as he said.

Our first adventure on the 16th was to break the towing line while pulling up the Ma-hoo rapid, two or three miles from Kwei-chow; but the trackers got hold of it again before any mischief happened; it might have proved worse. Just above this, the T'ow-tang ke, a stream rising in the north-west of Fung-tseih district, flows down through a broad channel on the left bank. The water in it was low and easily fordable when we passed. A little further on I found coal-slate and very inferior coal cropping out on the face of the hills at several places, three or four hundred feet above the river. There were mines at no great distance, and I observed people carrying a very fair description of coal, which cost a cash a catty delivered at the boat. The freight to E-chang was 8 cash the picul. Having met with a strong head wind, we anchored early in the day at Sze-yen to, a small bay on the left bank.

Early on the 18th we again left our halting place, and soon passed the Woo-lung ke, a mountain stream on the right, and a little further on the same side the Laou-ma ke, with the village of Gan-ping at the mouth. A strong rapid here is named the *Laou-ma tan*, "Old horse rapid." In the afternoon we passed the Meaou-ke tan, another strong rapid. In the forenoon our course was skirted on both sides by hills of moderate height, sloping gently down towards the river, but later in the day they became more abrupt. The formation was red sandstone in horizontal strata.

The following morning we passed the Tung-jang river on the left. This rises near the border of Shen-se, receives a small tributary from the east, and enters the Keang on the east of the city of Yun-yang, after a course of more than a hundred miles. At a distance of ten miles from the city, up this river, there are

ten salt wells, producing rock salt. On the south bank, nearly opposite the Tung-jang is the Sin-keun river. This rises from two sources in Hoo-pih, which unite in the southern part of Yun-yang district, and flow on for more than two hundred *le* to the mouth. The city, which stands on the left bank, immediately beyond, is poor, but we observed some imposing temples and public buildings. By far the most conspicuous from the river is the 萬壽宮 *Wan-show kung*, the Keang-se guildhouse. There are also the 粵東公所 *Yu-tung kung-so*, "Canton guildhouse," 帝主宮 *Te-choo kung*, the "Hwang-chow guildhouse," and several others. Our stay here was short, and we moved on again the same day, and anchored a good distance up, opposite the village of Pan-to, and just against an overhanging cliff named Hea-yen, with a singular cavern in the face of it, more than a hundred feet above the river. This has been fitted up as a Buddhist temple, containing two large apartments. On the back wall of the inner chamber, three huge figures of the Buddhist trinity, have been cut in the rock. Along the face of the cliff outside, a series of niches contain the following images cut out of the rock in full relief:—太陽菩薩 *T^{ae}-yang poo-sa*, the "Sun God," Joo-lae Buddha, supported on either side by Kasyapa, the first Patriarch and immediate propagator of the esoteric faith, and Ananda, the second Patriarch, and the first who reduced the doctrines to writing. Next come 燃燈 *Jen-tāng* the preceptor of Joo-lae; 池藏 *T^e-tsang*, a deity of Siamese origin, Mandshusiri and Poo-heen, two Indian devotees much worshipped in Sze-chuen.

May 20th we found the weather getting rather hot for walking. Farmers were busy in all directions hoeing the cotton, which was only a few inches above ground. Wheat and barley were being cut. A great deal of ground was occupied by tobacco, which was still green and not at its full growth; while in some places the rise in the water had swamped the fields, destroying considerable portions of the crop. The rice was transplanted, but still flooded with water. It is all cultivated on terraces. Hereabout we began to observe a custom which is generally prevalent through the province, of erecting stockades and fortified enclosures on the summits of the most unapproachable hills; to which the people flee for refuge in case of invasion. In time of peace scarcely any remain there but the occupants of temples, the dwelling-houses being vacated for more accessible ground.

Military guard-houses occur at regular intervals along the banks, accompanied by models of the smoke telegraph turrets; but as to actual service, the guard are about as much a myth as the telegraph. Early in the day we passed the town of Seaou-keang kow on the left; on the west side of which the Seaou-keang* enters the great river. This has several sources; one rises in the north-east of the district of 開 *Keae*, under the name 板橋溪 *Pan-keaoi ke*, receives a small tributary from the south-east, and a larger from the north; after which flowing south by west, it receives two considerable branches from the west, passes to the south-east of the city of Keae, and is joined by the 臨江 *Lin-keang* from the west. It then flows south-east, and receiving the 墊江 *Teen-keang* from the west, flows on to the Keang as a large navigable river. Nearly all day there had been a continuous range of horizontal sandstone rocks on both sides of the river, which were probably covered, when the water was at its highest. The level was going down daily, although it had not nearly reached its highest. The increase is not a gradual and constant change, but is ever fluctuating from day to day or week to week, now rising and then falling, the changes in both directions being sudden and rapid, and I imagine to a great extent local, the permanent rise being the balance of the aggregate fluctuations.

In the forenoon of the following day we were at the district city of Wan, and this was the first place we had seen signs of business activity since leaving E-chang. Here the accumulation of shipping, the large and wealthy stores, and the general aspect of the place and people all bore witness to its commercial importance. There is a very large suburb on both sides of the *Se-ho*, "West river."† This river rises to the north-west, and has a very picturesque appearance as it passes the city, in a channel scooped out of the rock. The clear water falls down a cascade into a deep pool, and then flowing under a natural bridge, formed of a huge block of sandstone, emerges from a fissure by a shorter fall into another basin below; and so by a variety of tortuous bends, finds its way into the Keang. Probably no artificial bridge would withstand the force of this current in flood

* This river is also named 開江 *Keae-heang*, and 彭溪 *Pang-he*.

† This is also called 苧溪 *Choo-he*, "Hemp stream," in consequence of the cultivation of hemp on its banks. The old name is 池溪 *She-he*.

time; so a pathway is formed across by a series of piers about a foot square, and something like two feet apart; being in fact a line of stepping stones, firmly fixed to the bottom. This kind of path is rather common over these swift currents. On the west of the city and nearly connected with the suburb, stands a singularly abrupt and conspicuous hill, with apparently a large town on the top named 天子城 *Tsen-tsze ching*. Nearly all round are precipitous crags, some two or three hundred feet high, the only ascent being a path on the north-west side. Here it is said the famous Lew Pei garrisoned his troops about A.D. 220. We had not time to go up, but were informed that the place is now inhabited. There are three salt wells to the west of the city.

While we were at Wan, a number of barges forming the funeral cortège of Lo the late Governor-general, arrived from Ching-too with his coffin, which they were conveying to his ancestral place in Hoo-nan. The consequent fireworks, music, banners flying and official visits, gave the appearance of some great festivity. The French expedition from Cochin-China passed down at the same time; the unostentatious character of which was a striking contrast to the funeral.

On the 22nd we met with several rock islands in the stream, from twelve to twenty feet high; one large one about a mile from the city named 千金島 *Tseen-kin taou*. Early in the morning we passed the Too-kow ke, a stream from the south-east; and during the forenoon reached the Pih-shwuy ke, also from the south-east, a tolerably wide stream rushing down a rocky bed, in the form of a cascade. There is a village of the same name on the south side of it. At no great distance beyond this is the 湖灘 *Hoo-tan*, "Lake rapid;" so called because in high water season, the river overflows, and spreads out like a lake there. It is considered dangerous. The spot is memorable, as the place where the Mongol troops crossed the river, about 1240, when invading the Sung. A few miles higher, the Yang-ho ke from the west, enters on the left bank; and beyond that again the Seang-ho ke, nearly parallel with the preceding, but somewhat longer. In the forenoon we observed a number of temples curiously built in the caverns and nooks of the perpendicular cliffs, especially remarking the one that Blakiston speaks of, the door of which is reached by a ladder sixty or seventy feet high. As we advanced the hills were not so lofty, and less cultivated than lower down, but more wooded.

The following afternoon we passed the Hō ke* on the left bank, a stream flowing in from the west. Near this there were six salt wells. We anchored for the night at the village of Shih-paou chae.† This takes its name from a stockade on the top of a singular isolated rock. The rock itself is named the 玉印山 *Yuh-yin shan*,‡ “Jade seal hill,” as it is supposed to resemble a seal in form. It is a very picturesque object, the general form being that of a wedge lying on its triangular face, probably about 500 feet long, and 150 feet wide; rising vertically to a height of about a hundred feet, with a basement of some fifty feet more. The object of greatest antiquity about the place, is a bell in the temple at the top, dated A. D. 1618. A nine-storied gallery§ is built against the end of the rock, being the only way of access to the top; both that and the temple on the summit were erected in the Kang-he period (A. D. 1662-1722), and have been restored during the present century, everything now being in complete repair. On the ground floor of the gallery, a group of hideous figures, represent the warders of the regions of darkness, charged to usher souls into the presence of the judge. The temple on the top is an elaborate representation of the ten courts of hades, with all their tortures; Yen-lo wang the prince holding his court at the upper end. This is the Yama of Indian mythology. A stone inscription states that the enclosure on the summit of the rock is capable of containing several thousand people in case of need. They would certainly be very close packed. The Too-tsing river|| rises in the east of 梁山 *Leang-shan* district, and flows south-east, entering the Keang at the foot of this rock. We observed a bed of withered poppies in this neighbourhood, indicating that we had now got beyond the prefecture of Kwei-chow, and also that the season of cultivation was at an end.

Towards midday on the 25th, we came to a village on the left named Kwan-ke, where the river divides, forming an island about seven miles in circumference, with steep cliffs all round.

* This is also named the 跳蹬河 *Teaou-t'ang ho*.

† It is also written 石寶寨 *Shih-paou ch'ae*.

‡ It is also sometimes called the 石堡山 *Shih-paou shan*, “Stone citadel hill.”

§ A sketch of this is given in Blakiston's “Five months on the Yang-tsze,” p. 182.

|| This is also called the 涂溪 *T'oo-ke*; but the most common local name is 小溪 *Seaou-ke*.

The common name of the place among the people is Hwang-hwa ching. At the time of 李雄 Le Hung's rebellion in A.D. 370, the seat of government for 巴西 Pa-se region was fixed there, since which it has been known by the name of the 石城 Shih-ching, "Stone city." The supplementary branch of the river is called the 黃華水 Hwang-hwa shwuy, and the island 黃華洲 Hwang-hwa chow. In the afternoon we passed the Yuen ke on the right, a stream issuing from two sources to the south-east. A town of the same name stands at the mouth.

Our first movement next morning took us past the Yen ke,* a stream rising in the south of Leang-shan district, which flows in a general south-easterly direction till it enters the Keang on the left bank. In less than two hours we passed the Chung ke on the right, a small stream from the south-west. A mile and half beyond this took us to the departmental city of Chung on the left bank. This place is not large, but has a brisk retail trade, and there seems to be a good many literary men connected with it. The most conspicuous building as seen from the river is the 魁星樓 Kwei-sing low, a five-story building, dedicated to the god of the literati. Exactly opposite the city, the Shin ke flows in from the south. The Ming-yuh ke,† a mountain stream flows past the city on the west side, and the valley is spanned by a pretty stone bridge of three gothic arches and horizontal pathway of recent construction. During the afternoon and following day we passed four other small streams on the left, averaging ten to twenty miles in length:—the Ch'ow-shwuy ke, Tan-tsze to, formed by the union of two branches, and issuing opposite the northern end of the Shih tan, "Stone rapid," Tso ke, opposite Binquei island,‡ and Ting ke. Thirty-five salt wells are noticed in this department. We heard this day of a boat coming through the Woo-shan gorge, that had struck a rock and gone down, four men being drowned.

Early on the 28th we passed the Ch'ih ke and Lung-ting ke, two small streams on the left. A little way beyond is the

* The correct name is 淦溪 Yen-ke, the form 滄 being a local and unauthorized corruption. Another name is 鹽溪 Yen-ke, "Salt stream." In the commentary on the Shwuy-king it is called 鹽井溪 Yen-ting he, "Salt well stream."

† This is also called 漕溪 Tsaou-ke.

‡ The native name of this is 鸞珠埧 Lwan-choo pa.

Hoo-loo ke, a considerable stream on the right. This rises from two sources in Hoo-pih; the northern is called 龍嘴溪 *Lung-tsuy ke*, consisting of two branches united; the southern, also embracing two branches, is called 冷清溪 *Lang-tsing ke*. These two uniting, form the 後河 *Hou ho*, which flowing westward, is joined by the 漆蘭溪 *Tseih-lan ke* from the north-east, and afterwards the 江池溪 *Keang-she ke* from the north; continuing in a south-westerly direction till it enters the Keang, after a course of several hundred *le*. An island against the mouth of the river is called by the people 鳳尾磧 *Fung-wei tseih*. Nearly opposite this, the district city of Fung-too stands on a small spot of level ground on the left bank. The lion of this place is undoubtedly 平都山 *Ping-too shan*, a small hill standing immediately behind the city. This is one of the seventy-two celebrated seats of Taoism, and apparently one of the most renowned, the fame of the temples drawing numerous devotees from far and near. A zigzag road up the face of the hill, is lined with temples nearly from the foot to the summit, increasing in importance till the highest point is reached; special prominence being given to the rulers of darkness and their satellites. If the Buddhists have been successful in appropriating most of the attractive spots in the empire as sites for their temples, there at least the Taoists have the advantage of them. The natural beauties of the place, enhanced by numerous touches of art, are no doubt the great attraction, and very successful as a source of revenue. Besides which they have the prestige of several ancient worthies, who have lived, studied and exemplified the doctrine there. 王方平 *Wang Fang-ping* of the Former Han, and 陰長生 *Yin Chang-sang* of the After Han, two celebrated recluses, are both said to have attained the state of immortality on this hill. For many subsequent ages, the stove by which the latter wrought to obtain the philosopher's stone, was preserved as a precious relic. The cypress trees he planted are still pointed out, a pretty plantation on the hill side, but if any sceptic ventures to doubt their age, he is assured that they are at least the descendants of Yin's cypresses. The establishment is in the keeping of Buddhist priests, and a good many Buddhist shrines are to be found side by side with the Taoist deities.

Before daylight on the 29th we were on the way, and soon got into a part of the river exceedingly contracted by the large sandstone rocks projecting from both sides, and standing insulated

in the middle. It is thus divided into three channels in one part, and obstructions of this kind continue for some distance up, forming a series of narrows and rapids. One of them is known as the 大佛 *Ta-fuh*, "Great Buddha" rapid, and numerous inscriptions in white paint on the rocks thereabout, call upon all boats passing up and down, to make contributions towards the repair of the old temple, which is supposed to exercise much influence on the destinies of travellers. In many places the rocks are perforated almost like honey combs, with the numerous holes made by the boat poles, which have been stuck into them for many bygone generations; and some of these we found thirty or forty feet above the water level, indicating a corresponding rise. In the morning we passed the Pih-shwuy ke, a stream on the right, and later in the day the Lo-yun ke on the same side. Directly opposite the last-named, the Ma-tan river enters on the left bank. A few miles further on the same side is the mouth of the K'eu-ke river, which rises in the north-west of Chung department, and flows in a south-west direction for more than two hundred *le*. A town called Shin-ke stands at the mouth. There were formerly two salt wells in this district, but they are now abandoned.

In the forenoon of the following day we reached the minor departmental city of Foo.* There is an extensive suburb along the river side, but only one street of any importance in the city. The most conspicuous object as seen from the river is the Confucian temple with red walls and green and yellow glazed tile roof. A little to the west of it is seen a temple to Kwan-te with a green roof. Just opposite the city, on the north bank, is the 北巖 *Pih-yen* hill, a place of some fame, as the spot where the Taoist devotee Wang Fang-ping prosecuted his contemplative exercises, before the Christian era. But it has gained a later celebrity from the famous 程頤 Ching E, the annotator of the classics, who held office in the city during the 12th century, and was accustomed to

* Foo is the somewhat anomalous pronunciation of this name by the natives of the place; but there is reason to believe that the older sound was Pei, if we may rely upon an ancient rhyme that has been handed down, thus:—

益梓利藎

Yih tsze le hwei,

最下忠涪

Tsuy hea chung pei,

恭萬尤卑

Kung wan yew pei.

"There's Yih, and Tsze, and Le, and Kwei,
And least of all are Chung and Pei,
But Kung and Wan more mean than they."

retire to a small grotto in the cliff, while writing his notes on the 易經 *Yih-king*. The grotto is still called the 點易洞 *Tsen-yih tung*, a cell about six feet wide by four feet deep, and eight or ten feet high. An endowed school for students has been established there in honour of Ching's memory since 1217, and has been revived from time to time, but like most institutions of the kind it is in a languishing state. The tutor was absent when I visited it, but his room exhibited all the apparatus of a scholar. I saw three young men, probably about eighteen years of age, who told me they were students, and said there were something over ten in all. The building is large and there are many traces of Ching and other scholars of later date. Adjoining the grotto are several pavilions and ornamental structures, ponds and paths, which together with the natural curiosities render it a picturesque and agreeable spot. It is customary for the mandarins of the city to pay a visit to the place on the 7th day of the year. On the east of the city, the 黔江 *Keen-keang** discharges its waters into the great river directly opposite the 銅柱灘 *Tung-choo tan*, a formidable rapid. This is entitled to rank as one of the second class rivers in China, draining as it does the main part of the watersheds of Kwei-chow province. Rising in the west, and absorbing an extensive system of ramifications, it gathers into one main stream, the waters of the six prefectures of 安定 *Ta-ting*, 貴陽 *Kwei-yang*, 遵義 *Tsun-e*, 平越 *Ping-yu*, 石阡 *Shih-tseen*, and 思南 *Sze-nan*, in Kwei-chow; besides half the prefecture of 施南 *She-nan* in Hoo-pih, and the districts of 酉陽 *Yu-yang*, 黔江 *Keen-keang*, 彭水 *Pang-shawuy* and 南川 *Nan-chuen*, with the department of Foo, in Sze-chuen; flowing in its greatest length nearly eight hundred miles, in a general north-easterly direction, before it joins the Keang. It is said there are brine springs to the south-east of the city; the supply was formerly sufficient to employ more than four hundred boiling pans. Between sixty and seventy miles up the Keen-keang, an intermittent bubbling spring is spoken of, which rises three times a day to a height of more than a foot. Ten miles east of the city iron is found, which is used by the natives for making knives.

* This river is also called 涪江 *Foo keang*, and 烏江 *Woo keang*.

In the forenoon of June 1st we passed the Le* river on the right, nearly opposite which is the Sha chow, an island more than three miles long.

Next morning we passed the Lung-ke river on the left. This rises in the south east of Leang-shan district, runs past the district city, receives eight tributaries large and small, one of which passes the district city of 墊江 *Teen-keang*; and enters the Keang after a general south-westerly course of more than a hundred miles. About noon we arrived opposite the district city of Chang-show, but as there was a strong rapid between us and it, our skipper objected to pass over. The city itself is on the top of a hill two or three miles from the river, but there is a large suburb by the water side, with a street leading up to the city. On the east side of the settlement is an old stone bridge of four arches with buttresses between, and a line of sheds on each side of the pathway. This crosses the Taou-hwa ke, a stream rising among the hills in the north of the district. Four miles beyond this we stopped for the night, at the village of Shen-pei to on the right, where a small stream flows in from the south.

Early in the forenoon of the following day, we were at the town of Lo-tseih chang† on the left. This is on the site of the ancient district city of 樂城 *Lo-ching*, which was abolished in A.D. 254. In the heat of the afternoon we stopped at the small village of Tae-hung kang, for the boatmen to rest for an hour. The village is perched on the top of a sharp ridge of rock of the same name, on the left bank, round which the Tae-hung‡ river winds. This rises in the west of the district of 大竹 *Ta-chüh*, and flows southward, receiving one tributary on the east, and three on the west, one of which passes the district city of 隣水 *Lín-shui*. About twenty-seven miles lower down it is joined by the 寶石 *Puou-shih* river from the north east, above ninety miles long. The united waters then flow south for more than a hundred *le* to the embouchure. Some few miles beyond this a small stream enters on the right; and a fine wooded hill appeared to stand far out into the river. This proved to be an island§ at high water season, but the water communication was

* This is also called 離鄉 *Le-heang* river.

† The old name of this is 樂磧 *Lo-tseih*.

‡ This is also called the 梅溪 *Mei-ke*.

§ This island is not noticed by Blakiston.

not complete when we passed. It is about two miles long and some four hundred feet high. A temple stands picturesquely on the slope of the eastern end, called the Chung-keang she, and this seems to be the name by which the island itself is known; but another name given by the natives is 夾沙垵 *Ta-sha pa*.

Late in the afternoon of the 6th we passed up the *Tung-lo hea* or "Gong gorge," so named from some fancied resemblance between that musical instrument and the stones in the cliffs; this is named Iron gorge by Blakiston. Compared with the gorges we had already come through, this was tame; the hills were neither so high nor precipitous; but there were some pretty hamlets scattered about here and there. A small village stands on the left bank just beyond the upper end, and a stream from the north enters the river there. Two or three miles beyond, where the river takes a bend, we found them working coal in the face of the hill on the right bank.

We were on the move next morning before daylight, and as soon as we could see anything Chung-king was in sight, and the Pinnacle pagoda or *Wän-fung ta* in the distance. As we approached the city, the banks of the river were pretty and interesting, from the number of temples and other buildings almost in continuous succession; and the numerous junks anchored along both sides, indicated the proximity of a great mart. There are two cities, one on either side of the tributary river Hō-chow ho. That on the north, Le-ming, is a secondary to Chung-king prefecture. It lies up the slope of a hill, and occupies a considerable space of ground, but there are only two business streets in it, one at right angles to the other. The prefectural city of Chung-king is on a very different scale, and has every appearance of a great mercantile emporium. During the four days we spent walking through it, I can scarcely say we visited every street, though we were through the principal thoroughfares. I should think the population is not inferior in number to Hankow. The city stands on a triangular point of rock between the Ho-chow river and the Keang, and is from two to three miles in length. The name of the district is 巴 *Pa*, which was formerly the name of a large region of country there, and is said to have been given on account of the outline of the principal watercourses resembling that character. It requires a good deal of fancy to trace the resemblance. The hill immediately to the west is a vast necropolis, being apparently the general burying-place for the city. It is customary to build

substantial stone family vaults, with several compartments, in anticipation of future need. Many such were occupied by living beggars, and made very comfortable dwelling-houses for them. The Hō-chow river, which separates the two cities, was the largest affluent of the Keang we had met with up to that point, since leaving the Han at Hankow. Its principal trunk, the 嘉陵江 *Kea-ling keang* rises in the neighbourhood of the 淮 *Hwae* in Shen-se. Flowing southwards into the province of Kan-suh, it receives the 西漢 *Se-han*, a very considerable river from the north-west with its many tributaries; and entering Sze-chuen traverses the prefectures of 保寧 *Paou-ning*, 順慶 *Shun-king* and Chung-king. In the north of the province it absorbs the 白水江 *Pih-shwuy keang*, a river rising in Tibet; and farther south the 涪江 *Fow-keang* from the west, which traverses the prefectures of 龍安 *Lung-gan* and 潼川 *Tung-chuen*, and the 渠江 *Keu-keang* from the north-east, both large rivers with innumerable branches. The confluence of the two last with the Kea-ling takes place nearly at the same point, on the south-east of the departmental city of 合 *Hō*; and hence the river is named the Hō-chow from that point, till emerging from the 魚鹿峽 *Yu-luh hea*, "Fish and Deer gorge," it enters the Keang at Chung-king. It thus embraces the waters of nearly the half of Sze-chuen, and a considerable part of Shen-se.

This is a most important river in a commercial point of view. In the autumn and winter months, when the water is falling, native merchants take advantage of the Keang, to carry their goods up through the western provinces; but during the spring and summer season, when the river is flooding, it is customary to ascend the Han, as far as the district city of Meen; there they hire mules for about forty miles over the hills to 陽平關 *Yang-ping kwan* on the Kea-ling river, where boats are obtained, and water communication thus opened up through a very extensive region in the principal part of Sze-chuen, without hazarding the dangers of the gorges.

Parties wishing to go to Ching-too the provincial capital, with the least expenditure of time and money, will under ordinary circumstances find it most economical to proceed overland from this point; whence the journey may be made in ten or eleven days by chairs; while by water, it will probably quadruple that length of time. The shorter route however was not consonant with the object of our journey, so we continued by boat as before.

Ere leaving Chung-king, some important changes had to be made in regard to the boat; the large bowsweep was dispensed with, the sail was disposed of, the crew were discharged, and a new set of men engaged who were familiar with the upper river navigation, the number being reduced to ten or eleven in all.

Our second day brought us to the pretty little wooded rock island *Kwei-ting-tsze*, "Tortoise pavilion," that being the name of an octagon structure on the top, with a temple attached. The rock is supposed to resemble a tortoise in its outline; hence the name Kwei, which the natives pronounce Kew. Within two miles of this we reached the 大茅 *Tu-maou* gorge, commonly called the Maou-urh gorge. In this the rocks on the left bank are very precipitous and overhanging in most places; little sheds and houses being tucked into all sorts of curious spots, with here and there Buddhist shrines. The right bank is less abrupt; but on both sides there are numerous limestone quarries for the whole length of about a mile. There is a cave in in the gorge named the 棲真洞 *Tseth-chin-tung*, where tradition says that the Taoist devotee Maou was raised to immortality; and from this event the gorge gets its name. Some three or four miles beyond, is a strong rapid on the right; a little to the south of which is the 焚溪 *Pih-ke*, commonly known as the K'e-keang-ho. This is a river of some importance, rising from two sources in the district of 桐梓 *Tung-tsze* in Kwei-chow province; and passing the district city of 綦江 *K'e-keang*, it receives a number of tributaries large and small, during a general northerly course of about a hundred and fifty miles, to its embouchure.

Towards midday on the 12th, we were at the district city of Keang-tsin, a thriving place, with two good business streets. There are large stores of wood, bamboo and coarse crockery. The latter article is said to be manufactured at a place called 大巴崖 *Ta-pa yae*, a few miles distant to the north of the river. At Lung-mun tan, where we stopped for the night, a large rock juts far out into the river, causing a rapid which is considered dangerous in high water season.

On the 16th we passed Tuman-shah Island, a low bank about a mile and half long, with a few houses on it, and shortly after, the town of Choo-kea-to on the left; beyond which at no great distance we came to a somewhat formidable rapid at a place called Tuy-kea-shih.

Early in the forenoon of the 18th, we were at the district city of Ho-keang. There is one good business street inside, from the North to the South gate. Another and shorter street enters it at right angles, but the shops are of an inferior class. A busy suburb runs along the river side, some two miles in extent. The Chih-shwuy ho, a river of about three hundred and fifty miles length, enters the Keang on the east of the city. Rising in the north-west of the prefecture of 鎮雄土 *Chin-heung-too*, it dips into the province of Kwei-chow for sixty miles or more, passes the district city of 仁懷 *Jin-hwae*, and receives a large number of accessories, forming a very tortuous course in a general north-easterly direction. One of its southernmost tributaries is named the 鹽井河 *Yen-tsing ho* "Salt well river," implying the existence of such wells in the vicinity. From the exceedingly winding character of the Keang, between Keang-tsin and Ho-keang, the distance by water is half as far again as by land.

In the forenoon of the 19th we reached Scherescheusky Island, opposite which, near the left bank is a strong rapid; and towards evening we came to another.

On the evening of the 20th we arrived at the large departmental city of Loo, where we remained till the 25th. An active trade is carried on there, yellow silk being a great article of culture and manufacture in that region. The city is agreeably situated, surrounded by hills of a moderate elevation. Nearly a mile west of the city is a very handsome Taouist temple named 呂祖閣 *Leu-tsou-koh*, erected at the expense of the Taou-tae, and efficiently maintained by a number of wealthy families in the city. Leu-tsou is reputed one of the 八仙 *Pa-scen*, "Eight immortals." In the front of the principal building he is represented in effigy seated on a stork. A neat little closet with a couch covered with scarlet cloth, on the upper floor, is shewn as his bed chamber. There is a beautiful garden behind, a good specimen of Chinese art, filled with dwarfed trees of strange device, rare and curious plants, fish ponds, rockeries, summer-house, &c. all kept in perfect order, with two or three stipendiary priests attached. For several days previously, we had found the natives practising with the dragon boats, at various places along the river, where clubs are established for the purpose; and happening to be at this city on the 23rd, no persuasion could induce the boatmen to move on the following day, the 5th of the 5th moon, being the anniversary of the death of Keu-

Yuen,* and the day of the Dragon boat festival all over the empire. The day bore every appearance of a holiday; from an early hour, small parties were seen collected together in anticipation of the event. As the hours wore on, boats filled with pleasure parties began to assemble, bent on an afternoon's enjoyment, the majority being females, and not a few children, all decked out neat and clean, while good humour seemed everywhere dominant. The city magnates were present in their barges, and a few gun-boats kept passing up and down as a kind of river police. Both banks of the river were crowded with spectators, and about 4 o'clock a shot was fired as a signal, when eight dragon boats of various colours, blue, yellow, white, black, gold, silver, &c. belonging to so many companies, started together. Each boat carried about twenty-six paddlers sitting two abreast, besides a coxswain, a steersman, and a drummer. Off they shot across the river, contending against a powerful downward current, at a pace that would not disgrace some of our amateur oarsmen. On reaching the right bank, one from each boat landed, plucked a handful of grass, and returned with it to the starting point, when the race was over, the whole occupying but a few minutes. The palm was sharply contested by the two first boats. The T'ó-keang, a very considerable river enters the Keang on the north-east of the city. This originates from ten or more sources in the north of Ching-too prefecture; some of its head waters being connected with the upper branches of the Min. Its importance may be judged by the fact, that in a course of three hundred miles it passes fifteen district cities, besides communicating with many more by an extensive system of tributaries. Nor is its written history one of recent date, for this is one of the chief rivers named in the "Tribute roll of Yu," in connection with his first engineering efforts; where it is said—"The T'ó and the Ts'een were conducted by their proper channels."†

The forenoon of the 25th brought us to a spot where a large expanse of the river was a very shallow covering of a shingle bed,

* Keu Yuen was a minister of the kingdom of Tsoo, in the 4th century B. C. whose integrity having provoked the jealousy of rivals, underhand means were successfully resorted to, to procure his disgrace. Slighted by his sovereign and weary of life, he ended his days by precipitating himself into the Meih-lo river; and the dragon-boat fête is a traditional custom, representing the boats that went out to search for his body.

† 沱潛既道 T'ó ts'een-ké taou.

which we had some difficulty in getting over, rubbing the bottom in many places; but I believe there was a deeper channel near the left bank. A few miles above this on the left bank, we passed the town of Shih-p'ang-kwan, and a little way past that, came to a formidable rapid on the right, caused by a reef projecting far into the river. Our skipper considered this so dangerous that he requested us to go ashore till we were past it. Here a boat was stationed by the authorities of Na-ke, for the purpose of picking up persons who might get into the water; corresponding to the Humane Society's boats in England. This was the first of these boats we had seen since leaving Hankow. About half a mile past this, another reef runs farther out into the stream, but is considered less hazardous. Having passed this we crossed to the left side; but unfortunately our slip in crossing, brought us just below a jutting point of very difficult passage. A temple to Wang-yay stands on this point of rock, and the priest was careful to tell us, that since that temple had been built, the passage was much less dangerous. After a delay of nearly two hours, and twice breaking the towing line, we got round the point, and anchored for the night two or three miles higher up, opposite the city of Na-ke; but the boatmen would not cross over, as they said, on account of the strength of the current. Here the Na-ke river, also called the 雲溪 *Yun-ke*, and more commonly the 清水河 *Tsing-shwuy-ho*, enters the Keang. This springs from two sources near the northern boundary of Kwei-chow, and almost south from the city of Na-ke. About a hundred miles long, 永寧 *Yung-ning* is the only district city it passes; but it receives a considerable tributary from the west, which touches the ward city of 瀘 *Loo*. The city of Na-ke lies on the east of this stream, but it appears to be very thinly inhabited. On the west side is a very considerable suburb, more than a mile long. About thirty miles from the mouth of the river is the 江門峽 *Keang-mun-hea*, a very famous gorge. In early times, the river was all but impassable at this point; and it was not till the commencement of the Ming dynasty, that the obstructions were cleared away; while the land passage remained one of the most difficult in the province. In 1392, the founder of the dynasty appointed an imperial commission, who removed the offensive boulders, and the following year the river was first made navigable.

In the forenoon of the 26th we passed a strong rapid a little before reaching the village of Yay-choo-yae on the left and another,

higher up. The Tsing-ke, "Clear stream" issues hereabout on the right; a small watercourse, which is said to retain its clear transparency all through the flood season, when the Keang is so heavily charged with mud; and hence the origin of its name. In the afternoon we passed the village of Tsing-kow, "Well's mouth," in the neighbourhood of which former accounts speak of salt wells, if they do not now exist.

Late on the 27th we arrived at the district city of Keang-gan on the right. Inside the wall are two busy streets, crossing each other in the direction of the cardinal points. There is a narrow line of houses also between the city wall and the river, but no great appearance of trade. The Gan-ning ho, a tolerable-sized river, emerges on the west side of the city. This rises from several sources about seventy miles to the south. One branch passes the district city of 拱 *Kung*; two others, that of 長寧 *Chan-ning*; and another the city of 興文 *Hing-wan*. The united streams flow northward, passing the town of Gan-ning on the east.

We passed Sarel Island in the forenoon of the 29th, just beyond which is a moderate rapid at a place called Ta-shih-pwan. Beyond the upper end of Burton Island there is said to be a strong rapid sometimes, but there was nothing of consequence when we passed. In the evening we anchored at the district city of Nan-ke, which appears to be a quiet comfortable kind of place. There is one long street from east to west, and several cross streets; but we were overtaken by darkness before we had time to go all over the city.

Early in the forenoon of July 1st we passed the village of Nan-kwang-tung on the right, standing on the west side of a picturesque ravine, through which the Lae-ful-too river finds its way to the Keang. This originates in six streams, rising about the southern boundary of Seu-chow prefecture, the waters of which all unite on the north of the town of 平寨 *Ping-chae*, under the name of 宋江 *Sung-keang*. Thence winding northwards, it passes the district cities of 高 *Kuou* and 慶符 *King-foo*, near which latter it receives a tributary from the district city of 筠連 *Yun-leen* to the south-west, and flows north-east to its embouchure, altogether more than a hundred miles in its greatest length. A few *le* beyond this village, on turning a bend in the river, we had the large prefectural city of Seu-chow full before us, in the angle formed by the confluence of the rivers Keang and Min. The rock of which Blakiston speaks, south of the city, was covered, and formed a strong rapid; and we hauled up some distance above

that before attempting to cross. We then worked round to the north-east side and anchored in the Min; thus taking leave of the Keang after a three months journey up its muddy waters. I have given several of the local names of the Keang upwards. Here the general name of Keang terminates, and formerly the northern confluent was considered the main trunk, known also under the names of 汝江 *Wan-keang* and 都江 *Too-keang*. Now however the southern stream is generally admitted to be the main, and is named the 金沙江 *Kin-sha-keang*; also sometimes the 馬湖江 *Ma-hoo-keang*, and the 瀘水 *Loo-shuwy*. The colour of the water seems to mark this as the principal channel; and we were immediately struck by the difference of hue, the Min being comparatively clear. The latter is also narrower, being somewhat contracted at the mouth, where it cuts its way through a mountain range running north-east and south-west; and the current is not quite so swift. The 合江樓 *Ho-keang loo*, "Gallery of the United Streams," a fine long three-story building, stands conspicuously at the angle, outside the wall. The city is one of the first class, in magnitude, importance, and general appearance. There are many fine streets; the shops are well stocked, and there is every appearance of an active commerce. The literary examinations were proceeding while we were there, which still farther increased the animated aspect of the place.

We now part from the united waters of the Kin-sha keang and Ya-lung keang, still more than a thousand miles from the source of either, and proceed in a north-westerly course, up a stream sensibly diminished in volume. Within about a mile of the city, a cliff on the right bank bears the two inscribed characters 鎖江 *So-keang*, "The locked river," a relic of the middle ages, indicating the importance that was attached to this pass in early times. The left bank is here flat, and about two miles beyond, the cliffs on the right come to a terminus in a bold projecting bluff; in which a broad flight of steps is cut up to the summit. Round this point the water recedes into a small bay, and the river becomes much wider. A little beyond was a large sand and shingle flat, connected with the right bank, which would have been an island some two miles long, if the water had been a foot or so higher, and must be entirely covered at the time of high water. Walking along the bank, we observed numerous signs of gold washing, indications of which we had also seen at several places along the Yang-tsze. We were too late in the season to see the operation

in actual progress, as it is only practised during the low water period; the particles of gold sinking towards the lowest parts of the bed. Here however the labours of the washers had been very recent; and one of the machines was still standing on the sand, as if it had been just left by the operatives. A shallow bamboo basket, about eighteen inches across, rests on two feet, by means of which it is rocked to and fro. Fixed on a table-like stand is a long wooden surface, inclined at about fifteen degrees, on which the sand and water are precipitated and run down, while the weight of the gold particles causes them to remain at the upper end of the slope.

The right bank was there nearly twenty feet above the water, but I was informed that in the time of high water, it was submerged for several feet, a statement corroborated by the existence of an embankment a little way inward. A large curve in the river towards the west is known as the *Tung-lo wan*, "Gong bend." This is caused by the position of the hills; two ranges coming to a termination here on the left bank. These are of bright red sandstone in horizontal strata, from five to six hundred feet high, and the greater part cultivated. A narrow valley runs north-east between the two ranges; and the village of Soo-po-ke at the mouth is a memento of the poet Soo Tung-po, who frequented the spot. About dusk on the 3rd, we stopped for the night at a hamlet named Neu-kow, on the left, just beyond a large island.

Next morning soon after sunrise, our passage cut through another cross range, the left bank presenting a most remarkable red sandstone bluff, named the 朝陽崖 *Chuou-yang yue*, also called the 赤崖 *Chih yae*, "Red cliff;" but the popular name is Tseen fuh yae, "Precipice of the thousand Buddhas." On the western side are two or three houses of entertainment. Zig zag flights of steps are cut in the steep face of the cliff, and lead to an embattled wall about half way up, with a block of buildings within. Steps continued to the summit lead to the 天平塞 *Teen-ping chae*, a stockade with a most commanding position, having complete control of the river. A little further on, the cliff forms an abrupt precipice overhanging the river, beautifully ribbed by a series of vertical lines, formed by the water trickling down the surface. Above the towing path is quite a gallery of sculpture, containing a number of tablets of Buddhist mythology; just beyond which are four conspicuous characters 丹山碧水 *Tan-shan peih shui*, "The carnation hill and jasper waters." As we round the bluff,

we get in sight of a natural stone pillar, some fifty or sixty feet high, with a large tree in the cliff overshadowing it. This is termed the Keang-keo tseih, "River's foot rock." The right bank is comparatively low, the cliffs scarcely a hundred feet high, but increasing gradually as we advance. Some three or four miles higher up, is a long line of lofty precipitous cliff on the left, where the river goes by the name of 石鴨子 *Shih-ya-tsze*, "The stone ducks," and a strong rapid there is termed the "Stone duck rapid." Towards the upper end, a stone tablet in front of a dilapidated temple, contains some notes regarding the river, which I thought it might be worth while to jot down, thus:—"More than sixty *le* from the prefectural city, the Stone duck rapid is so named on account of its dangerous character; not that there is really any stone duck there, but in the last month of winter the water comes rushing down like a flock of ducks; when boats from above should keep within ten feet of the east bank. Below this is a place called the 魚兒石 *Yu-erh-shih*, "Fish stones," where are several remarkable stones resembling fish, twenty or thirty feet long. Some years they appear above water; in others they are a foot or two below, when boats ought not to pass over them. When the river is narrower, several stones appear also on the bank like crooked horns. A little below is the "Great rock horn," standing upright in the middle of the stream. There are also three curious stones named the "Three spear stake stones," as they stand together resembling spears. Besides these, there are the "Leprosy stones" and the "Beetle-shell stones," forming most dangerous rapids, and though several feet under the water, boats passing over them are severely shaken." Just about the spot where these interesting varieties occur, it was the fortune of our towing line to snap in two, and down we went with accelerated velocity a mile or so, before they could manage to haul up to the shore. No mischief however occurred, beyond the delay. The character of the river in the vicinity may be surmised from the fact of a life boat being stationed there. A mile or two beyond this, a considerable-sized stream, called the 登溪 *Täng-ke*, and popularly the Täng-t'ow ke, cuts its way through the rocks on the left. The source of this is said to be more than a hundred *le* distant, but it is only navigable by boats about five miles up. A little higher, on rounding a rocky headland on the right, the hills by the river side become lower and less precipitous, and the Chin-ke river flows in from the north-west, against the village of

Chin-ke-kow. Soon after passing this we arrived at a long narrow shingle spit, stretching directly across the river from the left bank, half a mile or more. After losing a good deal of time in getting round this, we were against the Kaou yae, a perpendicular cliff level like a wall, about 200 feet high, with a flight of steps cut in the face, by which the trackers ascended to the summit. Past that the water runs very strong for a long distance, and there is a powerful rapid at the upper end, where passengers are requested to go ashore, and make an ascent, somewhat perilous for slippery shoes, up a narrow broken pathway in the rock. An island opposite the rapid, about three miles long, is named the Hwang-teen pa. A mile or two beyond, a small stream coming down a ravine on the left is known as the Man-tung ke, "Stream of the Man-tsze caves." A fine specimen of these cave dwellings is seen in the cliff on the north side of the ravine, and there are probably others farther up the stream.

Here I ought to say a few words on these remarkable excavations, which we had been in the habit of observing almost daily, since the day we left Chung-king. Our attention was arrested by square apertures in the face of the cliffs, generally at heights inaccessible by ordinary means, and with no visible media of approach. In answer to all inquiries as to what they were, the uniform reply was that they were 蠻子洞 *Man-tsze-tung*, "Caves of the Man-tsze," a wild and early race of people, who inhabited that part of the country so late as the 3rd century of our era. Their descendants having been driven back into the less cultivable mountain regions in the west, have continued a distinct race to the present day, never having amalgamated with the Chinese proper as a nation. Emissaries from them emerge from their seclusion periodically, for the purpose of bringing down their native produce, chiefly woven fabrics, which they barter in the Chinese markets. Such is about the sum of the information that I could gather from the natives regarding them; but an investigation of the early history of the empire, at the native sources, would no doubt disclose many interesting facts, in an ethnological point of view, and well repay the trouble. Men eminent for their gifts and attainments, at times emanated from their community; their contests with the subsequently dominant race were long and severe; and for many centuries after their complete subjugation, or rather expulsion, their name was used to designate the whole of Southern China; albeit generally as a term of contempt cast upon the

inhabitants by rival nations. Even down to the time of the Yuen dynasty, we find Marco Polo, whose lot was cast among the Mongols, using the term *Manzi* for the proper name of the country ruled over by the Sung dynasty; but that appears to have been an invidious epithet applied by the Tartar conquerors to the Chinese in the south. No other traveller in China that I am aware of, gives the country that designation. We were naturally anxious to inspect these antique remains, and entered a good many of the caves. The majority of them are plain hollow cubes, laboriously chiselled out of the solid rock. The entrance is an aperture about four feet square, inside of which is an oblong chamber, some seven feet wide, by eleven feet in depth from back to front, and about six or seven feet high. The rectangular form is very fairly preserved, and the chisel marks are uniformly apparent all over the walls, but there is no attempt at smoothing. Such is the simplest form, but many others we entered were much larger and more elaborate; frequently we found recesses cut in the sides of the chambers, and in some I observed grooves, as if intended to receive a shelf. In some were several wards or chambers connected by passages, and occasionally apertures for windows. One I entered, evidently of a superior class, had an outer apartment, as it were a vestibule, about seven feet high, which led into a gallery by an ascent of near a foot. Two large chambers branched off on the right side, and three smaller ones on the left, these being separated from each other by thick walls of rock left standing. In two of the smaller chambers, recesses were cut in the walls on each side, as if intended for cupboards; perhaps wardrobes or something of the kind. On the face of this, and on some others, were specimens of carving; but they appeared to me too fresh to be of such an age, and I rather incline to the belief, that they are subsequent decorations. The subjects are connected with hunting life. These rock dwellings are exceedingly numerous; sometimes we see a solitary one; five is the most common number; but we often observed ten or a dozen together. Along the banks of the Min, especially, they may be almost numbered by hundreds; and in some places there is quite a colony rising tier above tier, as it were some Troglodite village. In some places we find them disappearing under the utilitarian hands of the quarrymen, whose excavations in places, having cut into the old caves, reveal the plan of the interior chambers and passages. In one place on the Min, near the village of 古佛洞 *Koo-fuh tung*,

they have left a passage hewn out under the rock, now used as an aquaduct, half a mile or more in length. All that I observed were hewn out of sandstone; no moss or vegetation of any kind had taken refuge on the walls, and they looked as fresh as if they had been newly made. Not a written character was to be found on them, nor did I see the slightest indication of idolatry. Many of them were high up in the perpendicular rock; fifty, sixty, and some a hundred feet and even higher. These will probably remain for generations unmolested, and are in many cases fringed with a crop of rank grass, protruding from the edge. Others that from accidental circumstances, have become more accessible, have occasionally been turned to account in recent times. Some I saw had been occupied by mendicants or other refugees; on some occasions I found them converted into Buddhist shrines; not a few are stopped up, and have probably been appropriated as rock sepulchres; one I found with a rude flight of steps built up to it, and used as a lumber room; and in one I observed the floor covered with fresh-turned earth, ready to receive the seeds of some vegetable crop. What has been the object of making them in such inaccessible spots? Some of the natives say, for self protection. I am not satisfied on that point; but if such were the case, they certainly had impregnable fortresses in the days of bow and arrow warfare. However that may be, they are no doubt the most ancient architectural remains in China, and would probably be worth further investigation.

The location of the remnants of these people is now chiefly in the provinces of Yun-nan and Kwei-chow. The 皇清職貢圖 *Hwang tsing chih kung t'oo*, "Illustrated notices of the tributaries of the Manchu dynasty," records the existence of the following tribes in Yun-nan:—the 羅婺 *Lo-woo* Man of Woo-ting and the neighbouring prefectures; the 窩泥 *Wo-ne* Man of Yuen-keang and neighbouring prefectures; the 苦蔥 *Koo-tsung* Man of Lin-gan and neighbouring prefectures; the 撲喇 *P'o-la* Man of Lin-gan and neighbouring prefectures; the 撒彌 *Sa-me* Man of Yun-nan and neighbouring prefectures; the 標標 *Leih-leih* Man of Yaou-gan and neighbouring prefectures; the 摩察 *Mo-ch'a* Man of Woo-ting and neighbouring prefectures; the 扯蘇 *Chay-soo* Man of Tsoo-heung and neighbouring prefectures; the 悔雞 *Hwuy-ke* Man of Lin-gan and neighbouring prefectures; the 麼些 *Mo-seay* Man of Le-keang and neighbouring prefectures; the 麥岔 *Mih-cha* Man of Woo-ting prefecture; the 婁且 *Man-*

tseay Man of Yaou-gan prefecture; the 利米 *Le-me* Man of Shunning prefecture, and the 普岔 *Poo-cha* Man of Keae-hwa prefecture. In Kwei-chow are noted, the Man tribes of Kwei-ting district, Too-yun prefecture and neighbouring places.

A short distance beyond the Man-tung ke, is the Kwan-yin ke, a small stream of no importance, and a few miles further on we came to an anchor after dark, against an isolated bank named Yung-lo pa.

Having spent a day at anchor there, in the forenoon of the 6th we reached a very wide part of the river bed, containing quite a series of islands and shingle flats, dividing the stream into several channels. On the left is the island of Tae-kung pa, cut off from the main land by a considerable stream about three miles long. There are also the islands of Seaou-kea pa, Seaou-shang pa, and numerous lesser banks, which must be ever changing with the varying height of the water. As the channel our boat was to pass up was very shallow, it was deemed advisable for most of us to go ashore, in order to lighten it; and we walked on a few miles to the large village of Ne-ke, where we waited an hour or more till the boat came up. Above this place the river is again contracted within comparatively narrow limits, between the hills on either side, which rise from one to two hundred feet high, and come down to the water's edge. After two or three miles the bed again widens out, with extensive shingle beds alternately on the right and left sides. The river now skirts the hills on the right, while a plain about a mile in width lies between it and those on the left. All day our view on the right was a promiscuous assemblage of hills, rising range above range into the far distance, the general bearing parallel with the river, the nearer, from one to two hundred feet high, and the more distant ranges apparently several thousand feet. Our view on the left was more circumscribed, scarcely any hill tops appearing beyond those in the immediate vicinity of the river. As far as we could see distinctly, they were all bright red sandstone and cultivated in terraces to the top. Such was the character of the banks, till our course cut through a cross range of considerably greater altitude a short distance beyond the town of Yue-po chang. After passing this, the hills recede on both sides, leaving a valley between, several miles in width, the river meandering from side to side. Some few miles beyond, strata of grey sandstone appear in the rocks on the left, interspersed between the purple, and

inclined northward at about 40 degrees. In many places they run out in reefs, forming a series of rapids, in one of which our boat turned round and we were driven back half a mile. A mile or two beyond this the cliffs come to a terminus, and the hills on the left recede abruptly to a great distance. From the town of Ma-lew chang the river had been inclining in a rather easterly direction, but now it took a sharp turn westward almost at a right angles, and at no great distance again resumed its northerly course. Passing some bold red cliffs on the right, a few miles further on, opposite the town of Yaou-koo chang, towards evening we were at the hill Tsze-yun shan, on which is a celebrated temple to Wang-yay, the guardian of the river. Nearly opposite this is a very conspicuous lofty red cliff, bearing on the face the inscription 孝女嵒 *Heaou-koo yen* "The filial maiden's pricipice." The current runs very swift and deep here, and as there is no towing path, it was with some difficulty that our men worked up with hooks and poles. Having got round the corner and hauled up for half a mile further under high cliffs, we crossed to the right and were barely able to make the point, where stands the village of Ho-kow. The Tsing-shwuy ke here enters the Min, after a flow of a hundred miles from the west, passing the borough of 馬邊 *Ma-peen* in its upper waters. As it was quite dark when we reached it, we could not see its actual size; but judging from the strength of the current, I should imagine the volume of water to be very considerable.

Four or five miles through a very tortuous part of the channel, brought us to the district city of Keen-wei, in the forenoon of the 8th. A large shingle bed separated the city from the river, and for about half the length of the frontage there was a considerable lake. The appearance of the place indicates a busy retail trade, the business part being entirely within the walls, and scarcely any suburb worth notice. A few miles higher up on the right is a prominent cliff known as the Man-tung. From the opposite side of the river, we could see distinctly nine of these caves in the rock. About half a mile above is a rapid, said to be the most dangerous in the province, and we crossed over to avoid it. The cliffs hereabout are mostly grey sandstone, inclined to the south at about 25 degrees, with large seams of coal on both sides of the river. In the evening we came to a strong rapid on the left, which with the aid of some auxiliaries we had a good deal of

difficulty in ascending, and anchored for the night immediately beyond.

Next morning on starting, through some mismanagement, our men lost control of the boat, and we were precipitately borne down the rapids which it had cost so much trouble to ascend the night before, being carried fully a mile before we could get a mooring. A mile or two beyond, the village of Mei-tan kow on the right is a mart for coals, with some workeable mines apparently in the neighbourhood. Higher up, on the same bank, a coal pit in the cliff was being worked at the village of, Ta-ma-tow.

On the evening of the 9th we anchored for the night at the town of Mo-tsze chang, and about two hours after starting on the following morning, passed close under a cliff on the left with some curious Buddhist sculptures, one of the Man-tsze tung having been apparently appropriated to the same purpose. A few miles beyond this we arrived at a very prominent rocky bluff, standing abruptly out into the river. This is called the *Tauou-sze-kwan* or "Taouist's cap," from a fancied resemblance in the form. At the south end a flight of steps is cut in the rock, which rising from the water, ascend below a huge overhanging mass. On the face of the cliff, just under the steps is the inscription 履險如夷 *Le heen joo e*, "Walking through dangers like an ordinary path." Low down near the water is a heavy chain, strongly fastened into the rock by iron staples, for boats to pull up by in case of need. One of the strongest rapids on the river runs past this, and men are always in waiting to render assistance to boats. Having reached the upper end of the cliff, it is customary for boats to have a hawser attached, by which they hold on till they get through the strength of the rapid, while crossing over to an island near the middle of the stream. Our skipper however neglected this precaution, and the strength of the men proving insufficient to bring us up to the island, we were swept down towards the right bank. All their efforts were now of no avail, and we were irresistibly sucked down into a boiling eddy. The men all dropped their oars instantaneously, and crouched down on the deck, expecting the next instant to be in the water, and not a word was spoken or a sound uttered. The boat was whirled swiftly round, close under an overhanging cliff, and had we struck, there is little chance that the present narrator would have been left to tell the tale. But we were mercifully preserved, for we just cleared by some two or three inches.* Immediately the head

got round, one of the senior trackers rose and assured the skipper that the danger was past. Undoubtedly it was the narrowest escape we had throughout our journey. Having thus been carried to the upper end of the eddy, the men easily pulled over to the island, and tracked up the east side. A mile or two above this, some coal mines were in active operation; and the small town of Se-pa chang a little further on is almost entirely dependent on the coal trade. Not far from this, the 竹根灘 *Chüh-kan tan*, another dangerous rapid occurs; to avoid which we passed up a narrow channel on the right for a few miles, inside some islands, and crossed to the left just above the rapid; where we learned that a boat passing over the day before had lost their bowsman.

For several hours before reaching this point, we had observed the atmosphere blackened by numerous columns of smoke rising on the left bank, and connected with the same a vast collection of tall wooden framings, resembling military look-out stages, except that something like a chimney was seen to rise from the top, and in many of them a stem like a flag-staff shot out high above the supposed chimney. These marked the spot of the far famed salt wells; an object which cannot fail to arrest the attention of the traveller, and as a matter of course we embraced the opportunity to visit such a curiosity. The neighbouring town of Chüh-kan-tan is named after the rapid; and a street at right angles to the river, a mile or more in length, brought us to the town of 筓子嘴 *Tseuen-tsze tsuy* on the other side of the island. Opposite this a stream issues from the left bank, on the north side of which is the village of 五通橋 *Woo-tung keaou*, with a number of these wells, and an excise office, where a duty of five or six cash the catty is levied on the article. On the south side is the village of 青龍壩 *Tsing-lung-tsuy*, consisting almost exclusively of salt establishments; a number of which we took occasion to enter. As they are all precisely the same in construction, merely differing somewhat in their dimensions, a description of one will suffice to give an idea of the whole. Over the mouth of the well is erected a strong tapering wooden framework, about fifty feet high, consisting of four corner posts and numerous cross pieces. From the centre rises a wooden cylinder, projecting twenty feet above the framing. The mouth of the well is covered by a stone, having an aperture of about five inches diameter. Down this is inserted a bamboo tube, from fifty to sixty feet long,

consisting of four lengths strongly bound together. The smaller tubes hold about a bucketful of brine, but the larger ones contain several buckets. Connected with the lower end of the tube is a strap, also formed of bamboo about an inch and quarter wide, by which it is lowered and raised. A horizontal axis attached to the wooden framing, carries a drum wheel about five feet diameter, nearly above the orifice of the well. Over this the strap passes, and is conveyed to a vertical cylindrical framework about sixteen or eighteen feet in diameter, and rising some fifteen feet from the ground. This cylinder moves on a wooden axis, fixed in a strong wooden framing, and is turned by two or more buffalos; the whole apparatus being under a shed. To each of these cylinders is attached the strap from two wells, one above and the other below, the straps being wound round it in reverse directions; so that by one motion of the cylinder, as the tube of one well is descending, the other is being drawn up; and thus they get a continued alternate motion without loss of power. Connected with the mouth of the well is a shallow stone cistern, into which the lower end of the tube is placed, when it rises above the orifice. A plug is then withdrawn, and the contents are discharged into the cistern. The ascent of the strap averages about a foot a second. One well we examined was from five to six hundred feet deep; another was eight to nine hundred; another was above a thousand; but we were told that some were considerably over two thousand feet. Father Imbert speaks of one more than three thousand feet deep, on which they had been engaged boring for about a dozen years.* The average time consumed in boring a well is about three years, and the cost about ten thousand taels. There are said to be many hundreds in the neighbourhood; some even named thousands, which is not improbable. The topography published in 1717 gives the number in the district as 614, but it has probably been greatly increased since that time. Father Imbert speaks of some tens of thousands within an area of about thirty miles long by about twelve or fifteen miles in breadth.† In some of them we detected a faint smell of gas, but it was scarcely perceptible. Some few of the wells we were told produced a very little petroleum of a green colour, but nothing sufficient to become an article of commerce. From the stone

* Chinese Repository, Vol. 19, p. 399.

† do. do. do. p. 325.

cistern, the brine is conveyed by bamboo pipes to the boiling house. This is sometimes in the immediate neighbourhood; but in other cases it is at a great distance, even as much as five miles or more; the aquaduct consisting simply of these bamboo trunks joined end to end. In some of the boiling houses we found as many as twenty or more furnaces, with so many strong iron boilers, each about five feet diameter and five or six inches deep. After the process of boiling is carried on for a day or more, during which time new brine is added as the evaporation proceeds, the result is a huge cake of salt, about five hundred pounds weight, and as hard as a stone. These cakes are broken into smaller pieces and are then ready for the market. The retail price there, after customs have been paid, is thirty five cash the catty. The following morning as our boat was slowly toiling up the rapids, we walked on a few miles to the town of Neu-hwa-ke, a place of some twenty to thirty thousand inhabitants, where these wells are very numerous, and we have every facility to confirm our experience of the previous day. The hill in which most of these are sunk is called the 紅巖山 *Hung-yen shan*, "Red precipice hill," on the top of which is one of those singular formations called Fairy bridges. As the sun was not very high above the horizon when we passed, and we were on the other side of the hill, the stream of light that shot through the aperture gave an extremely pretty effect. The rock was soft disintegrating sandstone. We could not get an opportunity to see the process of boring, but found one of the instruments they employ in a blacksmith's shop. It was a square iron rimer about ten or twelve inches long besides the shank, and two inches thick at the larger end, the edges jagged with large notches alternately in opposite directions. This was fixed to an iron spindle, and worked up and down in the manner used for husking rice. The famous Fire wells and Oil wells are at 自流井 *Tsze-lew tsing*, a place two or three days distant to the east.

Early in the afternoon of the same day we reached the *Ma-gan-shan* or "Saddle hill," a very conspicuous isolated rock on the left bank, with high bold red cliffs and two depressions on the summit. The fissures in the rock assume some very fantastic forms, and in places the cypress trees are seen growing downwards. The natives trace the forms of a horse's head in the northern end; and with the exception of a little imperfection about the ears, the resemblance is tolerably accurate. Immediately

beyond is 烏尤山 *Woo-yew shan*, another prominent hill densely wooded with large trees. On the northernmost pinnacle a truncated pagoda-like structure is seen through the trees, immediately below which is a precipitous red cliff. The old name of the hill was *Woo-nue shan* or "Black ox hill," as from its jutting position, it was thought to resemble an ox standing in the water. Before reaching this we had the prefectural city of Kea-ting full in view, and were at the confluence of two rivers. The westernmost is one of two outlets to the river Yang-keang, which though scarcely if at all inferior to the eastern, is yet considered the tributary. The main trunk of this river, called the 大渡河 *Ta-too ho*, is a continuation of the 金川 *Kim-chuen* river, which rises far away to the north-west in the Kokonor region. Entering the province of Sze-chuen, it crosses the borough lands of 雜谷 *Tsuh-kuh* and 懋功 *Mow-kung*, enters the prefecture of 雅州 *Ya-chow*, where it first takes the name of Ta-too, and receives the united waters of a multitude of small tributaries from the 打箭爐 *Ta-tseen loo* region. Still flowing southward for several hundred *le*, it then bends abruptly towards the east and receives the united waters of a number of minor affluents some of which pass the district city of 清溪 *Tsing-ke*. In its onward course it passes the borough town of 峨邊 *Go-peen* on the south, and when near the city of Kea-ting, receives the 青衣江 *Tsing e keang*, an affluent, nearly if not quite equal to the original stream in volume. It thus traverses a course of five hundred miles within the boundaries of Sze-chuen province, gathering up the contributions of innumerable feeders throughout the whole length. The Tsing-e, though much inferior to the Ta-too in extent, is probably from its position, the more important river of the two. Its head-waters rise in the neighbourhood of Mow-kung, and entering the prefecture of Ya-chow, two of its channels pass the district city of 蘆山 *Loo-shan*, then uniting, flow southward, and receive a collection of small streams from the neighbourhood of the departmental city of 天全 *Teen-tseuen* in the west, while a few miles further there is a much larger accession from a number of streams, one of which passes the district city of 榮經 *Yung-king*. The stream then flows past the prefectural city, and receiving two or three considerable affluents, one of which passes the district city of 名山 *Ming-shan* on the north, it enters the prefecture of Kea-ting, passes the district cities of 洪雅 *Hung-ya* and 夾江 *Ka-keang*, and receives a

united tributary, the principal branch of which passes the district city of 峨眉 *Go-mei*; a short distance beyond which it joins the Ta-too river, and the junction stream enters the Min under the name of the Yang-keang. A second debouchure of this river skirts the southern wall of the city, thus forming a delta of nearly equilateral dimensions each side about a mile and half in length. The strength of the current from this river is very great, and notwithstanding the precaution and skill employed by our boatmen, they failed in their first attempt to effect a landing against the city, and we were swept over to the east side. There ropes are attached to the bank, for boats to pull up by, and after working up the Min in this manner for nearly half a mile, we crossed to the city without difficulty.

The violence with which the waters of the Yang-keang dash against the opposite cliff, produces a rapid of very formidable character, known as the 佛頭灘 *Füh-tow tan*. The adjoining hill is named the 凌雲山 *Ling-yun shan*, and also the 九頂山 *Kew-ting shan*, "Nine summit hill" being indicative of its configuration. In the early part of the 8th century, a Buddhist priest named 海通 *Hae-tung* conceived the idea of a huge figure of Buddha, to avert the incident dangers, a design which was brought to completion after nineteen years labour; and there the figure now stands in a recess of the rock, an image of 彌勒 *Me-lih* Buddha, the most gigantic piece of sculpture in China, and perhaps in the world. Fan Ching-ta, who visited the place in A.D. 1177, gives the height of the figure as 360 feet, circumference of the head 100 feet, and breadth of the eyes 20 feet. The ears he says were made of wood, and the whole was screened by a thirteen story pavilion. The Topography agrees tolerably with the above numbers. I should have been disposed to estimate it much less; but appearances are very deceptive sometimes. Figures forty and fifty feet in height on the same cliff, look quite pigmies by the side of the brobdignagnian Buddha. No vestige of a building now remains in front, it being entirely open to the weather. Whether it be a freak of nature, or the work of some waggish priest I know not, but suspect the latter; for the vegetation on the crown appears so trimmed as to form a perfect head of hair; while creeping plants are pendent from the upper lip, much resembling a moustache.

Both in this and the adjoining cliffs, the caves of the Man-tsze are very numerous, and some are found also on the right bank.

Two or three days journey up the Ta-too river is the 峨眉 *Go-mei* mountain, the seat of an immense Buddhist establishment, almost without a rival; the celebrity of which is about on a par with that of Tae-shan, the rallying point of Confucianism in Shan-tung, and Woo-tang shan, the head quarters of Taoism in Hoo-pih. The scenery in the neighbourhood of Kea-ting is very picturesque, and indeed all the way up the Min, the views are scarcely excelled, even if equalled on the Yang-tsze. The humpback deformity is very common among the people in Kea-ting, a circumstance of which they find a ready solution, in the maladjustment of the *Fung-shwuy*. An active business is carried on in the city. Silk seems to be the principal production and manufacture, a large proportion of the population being engaged in it. This is the centre of the white silk region, but the yellow is also very common.

From this place to the provincial city, the journey is generally performed by land, and occupies five days; as it is but a small part of the year that the river is navigable so high up. We were fortunate in arriving at a time when there was no difficulty in this matter, either way being open to us; and it suited us far better to proceed by water, although it took double the time. On the morning of the 14th we left the northern suburb of Kea-ting, where a stone bridge crosses the Chüh-kung ke, a stream rising at 石牛 *Shih-neu* hill on the north-west. A little above this on the left bank is the Ne ke, a larger stream, the upper waters of which pass the district city of 井研 *Tsing-yen* in the department of Tsze. Early in the forenoon we reached a large shingle flat in front of the village of Hwan-leang tsuy, which extended far out, causing a sharp bend and consequently swift current, which cost our men a good deal of time and trouble. From a short distance above the city, the hills on the left bank recede from the river, while the right bank gradually increases in height, till we have a continuous range of hills down to the water's edge. The river is a great width in some places, but for the most part very shallow. Shoals and islands are numerous, which divert the principal channel into a very tortuous course. Just after passing a high, well-wooded and cultivated island, the river opens out very wide, takes a sudden bend eastward and then northward; a short distance beyond which we stopped for the night, above the village of Laou-kwan-yin meaou, only ten miles from the city. During the day we passed some large plantations of the Insect-

wax tree. A good deal of this is cultivated in the immediate vicinity of the city, and Mr. John discovered some several days before reaching Kea-ting. So much has been written on this singular production, that I can scarcely hope to throw any new light on the subject. The tree on which we found it is called by the natives the 白蠟樹 *Pih-lā shoo*, "White-wax tree" and resembles so closely the 冬青 *Tung-tsing*,* that only a close inspection can discover the difference. In the *Pun-tsaou Materia Medica*, the first authority quoted, calls it the *Tung-tsing*; but Le She-chin, the author of the work remarks that though it resembles the *Tung-tsing*, it is a different tree. Such is the testimony of intelligent natives also, though many call it the *Tung-tsing*. I suppose it is merely a botanical variety. The crop seemed to be just in perfection at the time we were there, and the plantations were very much the appearance of a snowy day, so completely were the branches enveloped in the substance. The only thing in which I observed a disagreement with the accounts published by foreigners was, that the wax was not the least translucent. It was snow-white and as opaque as tallow. The insects (*Coccus pe-la*) were of a dark brown colour, an indication that the season was approaching its end.

* I am informed by Dr. McCartee of Ningpo that the *Tung-tsing* is the *Ligustrum lucidum* of botanists; but he remarks that all although it grows very plentifully in that neighbourhood, he never saw or heard of the *Coccus* on it. I may add precisely the same testimony for Shanghai. In the last volume of the Chinese Repository, p. 424, is an article on this subject, written by Dr. Macgowan, and marked by the characteristic clearness of all his productions, in which he gathers up the various known facts, collected from native and foreign sources. In this he gives the name of the wax tree as *Ligustrum lucidum*. In an editorial note to the same, Professor Julien is quoted, as giving the *Tung-tsing* as one of the wax-bearing trees, which he translates by the *Lagustrum glabra*. Two other trees he names also bearing the wax-insect;—the *Niu-tching*, which he calls the *Rhus succedanea*; but I find Hoffmann and Schultes (in the "Journal Asiatique" for Oct.—Nov. 1852) calls the *Niu-tching*, the *Ligustrum japonicum* of Thunberg, and "*Oleaceæ*" of Endlicher. Another variety is given as the *Ligustrum obtusifolium* of Siebold and Zuccarini, and *Ligustrum ovalifolium* of Haskarl. The same authority states the *Rhus succedanea* to be the Vegetable-wax tree, which is a very different article from the Insect wax. Siebold, in the "Verhandelingen van het Bataviaasch Genootschap," gives the *Rhus succedanea* as the name of the Varnish tree. A short notice of the Insect wax is given by the Jesuit missionary Magaillans in the 17th century, but his information does not appear to be the result of personal observation. The earliest circumstantial account of the process by any European writer that I have met with, is a short *memoire* by the Jesuit Father Chanseau, in the *Letters édifiantes et*

During the night there was a sudden rise in the water, and the following day it was no longer clear as before, but had changed to a dark muddy colour. We found the right bank for several miles lined with the Wax tree; and during the day passed a great number of the Man-tsze caves on both sides of the river. Two or three miles beyond the village of Pan-seaou ke, the hills close in on both sides, and we enter the 羅漢峽 *Lo-han hea*, "Arhan's gorge." Some of the hills on the right there, are very precipitous and densely woods, occasionally exhibiting a sylvan scene of rare beauty. There we find several varieties of the weeping cypress, many species of fir, the wax tree, tallow tree, mulberry tree, mountain ash, the Tung-nut tree, the fan palm, a few plantains, and many other trees, of which I cannot tell the names, the variety of the foliage giving wondrous effect to the *tout-ensemble*. Immediately on emerging from this gorge, which is about three miles long, the river widens out, and the country has a much more open appearance. A mile or two beyond is the mouth of the Kin-neu ho on the right bank, a river that rises

curieuses," (Paris, 1781.) vol. 23, pp. 146 s. q. written about the middle of the 18th century. He speaks of two kinds of trees which produce the wax, but his description is confined to one, which he calls the *Kan-la-chu*, or "Dry wax-tree," which is evidently the tree we saw. The other kind which he calls the *Choui-la-chou* or "Aquatic wax-tree," he merely speaks of from hearsay. Grosier, Duhalde and subsequent writers have relied very much on this Father's account; but still it does not seem very clear how many different species, and what are really the trees that produce the wax. What is the 水蠟樹 *Shwuy-lā-shoo* or "Aquatic wax tree" does not appear to be very well known. Hoffmann and Schultes call it the *Ligustrum Iota*. Dr. McCartee (who appears to be the unacknowledged source of the principal information on the subject in recent European works,) tells me that when he began to enquire about the wax, the natives informed him that it was produced on the *Shwuy-kieuh-shu* or "Water orange," and says, when after two years search for it, he found the insect on the tree, he recognized it as one of the *Fraxinae*, and thinks it may possibly be the *Shwuy-lā-shoo* of the Chinese. Such is the specimen figured in Fortune's "Residence among the Chinese" p. 147 in the "Gleaner's Chronicle" for July, 1853, and in Hanbury's "Materia Medica," p. 41. He adds:—Dr. Bradley searched for the Wax insect at Snowy valley in the summer season, and brought me a branch of a small tree resembling a *Betula* upon which was wax, with the insects flying about it like bees." The same friend gives me an extract from the letter of a native correspondent at Kin-hwa, who states that there are three different trees that bear the insect:—the *Tung-ting*, the 六角刺 *Luh-keo-tsze* (*Ilex* or Holly) and the 碗芝花 *Yuen-che-hwa*, which last we have failed to identify.

among the 萬松 *Wan-sung* hills, on the northern boundary of Kea-keang district.

On the 16th we passed several Man-tsze caves, some of a large size; also the Sin-mo, a river of considerable magnitude which rises among the hills in the south-west of 丹稜 *Tan-läng* district, passes the district city, and flows south-east to the Min, receiving on the way a large tributary from the "Red cliff" hills on the north. Some of the 獠 *Leaou* tribes are said to have been settled on its banks at a recent period. A little later we passed a stream on the left coming from the 周家 *Chow-kea* hills, in the north of Tsing-yen district; and a few miles beyond, arrived at the district city of Tsing-shin in the department of Mei. This is enclosed by a red sandstone wall, and looks rather poor inside. The principal business street is from the east to the west gates, and a considerable proportion of the inhabitants are dependent on the silk trade.

In the forenoon of the 17th we passed the Yu-shay shwuy, a stream flowing in from the north-east, which rises among the hills in the north-east of 仁壽 *Jin-show* prefecture, between thirty and forty miles distant. Towards evening we were opposite the mouth of the Le-tseuen keang, a river rising from two sources among the 盤龍 *Pwan-lung* hills on the northern boundary of the department which unite about four miles to the north-west of the city, and receiving a tributary from the 筆架 *Peih-kea* hills, the junction stream flows south-east to the Min.

Early in the morning of the 18th we were at the departmental city of Mei, in front of which are two large islands, one of which prevents boats getting close up to the walls. Inside the south gate we found it very poorly inhabited; and the western portion seems to be mostly open ground; but there are several busy streets in the eastern quarter.

Soon after starting on the 19th, on turning a sharp bend in the river, we were in sight of the city of Päng-shan, a poor-looking place standing in about half a mile from the river, and connected by a little suburb; but we passed it without going ashore. About a mile beyond, a stream from the Pwan-lung hills discharges on the right. Three or four miles above this we reached the town of Keang-kow on the left, where there is a confluence of two rivers. Geographically viewed, the western is probably the more important, and is considered the main trunk of the Min; but the eastern which was our course, is invested

with a higher interest politically and commercially, as being the direct route to the provincial city. From this point we are about entering on the great plain of Ching-too, and an inspection of the plan of the watercourses of the country. From the Min mountain range, bordering on Tibet, the drainage of numerous watersheds all converge towards one central channel, which, confined within its rocky bed, enlarges with every successive accretion, till it reaches the district city of 灌 *Hwan*. There however, as if impatient of its long restraint, it takes advantage of the level country, to branch out into a multitude of divarications, forming a perfect network of minor currents, to the extinction of the main channel. These which are all included within the provincial prefecture, may be divided into three series. The northernmost series from part of the head waters of the T'oo river, which has been previously noticed. The western series some of the ramifications of which pass the departmental city of 崇慶 *Tsung-king*, and the district cities of 溫江 *Wan-heang*, 雙流 *Chwang-lew* and 新津 *Sin-tsin*, after reuniting the vagrant streams, receives a very large accession of affluents from the west, of which some of the streams pass the departmental city of 邛 *K'eung* and the district cities of 大邑 *Ta-yih* and 蒲江 *Poo-heang*. The central and less intricate series is the one enclosing the city of Ching-too, the principal stream of which, called the 府河 *Foo-ho* we were ascending. The united waters of all these channels meeting in a point opposite Keang-kow, we observed a very marked difference in the character of the river from that point upwards. Besides the great reduction in the volume of water, the islands were so numerous, that with the consequent expansion of the stream, it was very difficult to trace the banks. During the following days of our upward course, we observed a great many of the undershot water-wheels called 筒車 *Tung-chay*, used for irrigating the fields. A very accurate description of these is given by Sir G. Staunton.* They are no doubt economical and effective when in use, but for the greater part of the year they are turning round to no purpose, the natural result of which was seen in the broken down condition of many of them. But there is a much greater evil connected with them, in the obstruction they cause to the navigation. They are a detestable nuisance to the trackers, whose lines are

* "An authentic account of an embassy from the King of Great Britain to the Emperor of China." 4to. vol. 2 pp. 500 sq.

ever running foul of them, and at times can only be cleared at considerable difficulty and some risk. This is probably one of the things that would only be tolerated in a country like China, where inconveniences are borne with stoical fortitude, rather than make innovations on ancestral customs. During the day we had a range of low hills on the left, and observed a great many of the Man-tsze caves; some of which were rapidly disappearing under the quarryman's hammer.

In the forenoon of the following day we passed the *Kwang-lung ke* or "Yellow dragon stream," on the left; connected with which is a tradition, that in the year A.D. 219, a yellow dragon was observed for nine days in the water. More of the Man-tsze caves appeared in the cliffs on the right bank; and at the village of Koo-fuh-tung is a curious temple, built against the face of the cliff, nearly a hundred feet high, in which both Buddhist and Taouist shrines find a place; but the principal idol is a figure of Amida Buddha in a cavernous chamber on the south side, from which the temple takes its name. A range of low hills on each side of the river again restore it to something like a manageable outline.

About midday on the 21st, we parted company finally with the hills till reaching our terminus, and only saw them afterwards as distant ranges across the plain. Boating is very tedious at this part on account of the shallows; and in some places the current runs very strong; so much so, that our men twice lost control of the boat during the afternoon, and we were carried some way down.

Within a mile of our starting place on the following morning, we came to the first bridge that had crossed our course. There are seven openings, the two end ones being arches, and the five middle ones have planks thrown across from pier to pier. It is named the Urh-keang-she-keau, from a temple adjoining, dedicated to the spirit of the 二江 *Urh-keang*, "Two rivers," which designation the river goes by from this point upwards, bearing reference to the two streams that flow past Ching-too on the north and south, uniting in one a short distance below the city. Another name for the river in this part is the 錦江 *Kiu-keang*, "Embroidery river," in allusion to the reputed excellence of its water for washing embroidery, an article which is extensively manufactured in the vicinity. Immediately above the bridge we pass the mouth of the Sin-keae ho, a large affluent on the right, and our course

becomes still more contracted. At the town of Chung-hing-chang, a mile or two beyond, is a handsome stone bridge of seven arches across the river. Along the banks of the Min there is considerable architectural display in the temples and other public buildings; and the miniature pagoda-like turrets erected to the honour of Wan-chang the God of Literature, form a very tasteful relief in the landscape. There is much variety of design and some of them are highly artistic. Late in the afternoon we passed the mouth of the Tsow-ma ho, also called the 內江 *Nuy-keang*, "Inner river," which passes south of the district city of 郾 *Pe* and the provincial city; while the river we were ascending is named the 外江 *Wae-keang*, "Outer river," and flows on the north side, to a point above the city of Pe, where the two diverge from a common centre.

Early in the following forenoon we reached Ching-too, passed under a red stone bridge connecting the eastern suburb, and anchored a little below the east gate. The river was running very strong, apparently deep and muddy; an effect due to a sudden rise. Another bridge crosses the river, facing the east gate. This has a horizontal roadway, and a row of sheds on each side from end to end. Beyond this bridge boats do not proceed; so we had reached the highest navigable point on that branch of the Min. A swift flowing river skirts the southern wall of the city, the ends connecting with the Inner and Outer rivers respectively. Outside the northern wall is a wide city ditch, but nearly choked up with reeds and other vegetable productions.

The city is about thirteen miles in circumference, including the Lesser city, which is attached to the west side. The walls are in excellent repair. There are a number of handsome streets, especially that from the east gate. The shops are well stocked and many of them shew signs of opulence. Native productions of every kind are procurable, and foreign goods are quite common, both articles of utility and objects of taste and luxury. One street is devoted principally to clock dealers and *magazins de bijouterie*. French and English pictures are exposed for sale, and now and again we meet with an aspirant who can speak a little English. On one occasion I was detained by a polite young man to hear him repeat his lesson, and help him over some of his difficulties. Of course to a great part of the city the preceding remarks are inapplicable, but taking it as a whole, I should not hesitate to say that Ching-too is the finest Chinese city I have seen. Readers

of Chinese history, especially those familiar with the turbulent period of the 3rd century, will find objects innumerable to interest them in Sze-chuen. Ching-too is notable in this view, as having been the imperial city of the short-lived dynasty of Shuh or the Posterior Han. There is the burial place of Chaou-leih Te the founder, better known by the name Lew Pei. The 皇城 *Hwang-ching* or "Imperial city," inside the walls of Ching-too, still remains, a traditional memento of his royal residence. The area is now occupied by an Examination Hall, said to accommodate from ten to twenty thousand students. The whole has been restored within the last few years, and although some of the ancient names are retained, scarcely a vestige of the original buildings remain. I was pointed to some rockery and ornamental work in the garden, as relics of the original, but there was only a fragment here and there that bore the marks of great antiquity. Eight wells also called the 八卦井 *Pa-kwa tsing* are said to be of the same antiquity. One I was told had no bottom.

While we were at the capital, a plague was raging in the city, and people were dying at the rate of eighty per day. The epidemic was a kind of cholera called 磨脚病 *Mo-k'ö ping*. Consequent on this there was an extraordinary display of idol processions through the city, with a view to avert the calamity; and as it is just at such times that the people become more than ordinarily excited, I take it as a proof of the pacific character of the population, that we mixed freely in the crowd without the slightest molestation. We found them remarkably well disposed towards us, and I cannot recall anything offensive during our intercourse with them.* Indeed the same may be said almost of our journey

* Up to recent times, almost the only European author from whom we have any account of Ching-too, is Marco Polo, once maligned for his want of veracity, but now as generally vindicated. It is interesting to compare the brief notes of this old traveller with the actual state of the country. Of this city he says:—"Having travelled those twenty stages through a mountainous country, you reach a plain on the confines of Manji, where there is a district named Sin-din-fu, by which name also the large and noble city, its capital, formerly the seat of many rich and powerful kings, is called. The circumference of the city is twenty miles."....."The city is watered by many considerable streams, which, descending from the distant mountains, surround and pass through it in a variety of directions. Some of these rivers are half a mile in width, others are two hundred paces, and very deep, over which are built several large and handsome stone bridges, eight paces in breadth, their length being greater or less according to the size of the stream. From one extremity to the other there is a row of marble pillars on each side, which

throughout from the time we entered Sze-chuen. The officials, if they did not exhibit that cordial familiarity that we meet with in some places, were at least respectful in most instances, as it was our custom to announce ourselves formally to them, on our arrival at a city, and they never in any case offered to obstruct us. We went among the people freely and openly as Europeans, and were accepted as such, without any noisy demonstration; and I trust and believe that our visit will have the effect of strengthening any favourable tendency that may have previously existed in reference to foreigners.

support the roof; for here the bridges have very handsome roofs, constructed of wood, ornamented with paintings of a red colour, and covered with tiles. Throughout the whole length also there are neat apartments and shops, where all sorts of trades are carried on. One of the buildings, larger than the rest, is occupied by the officers who collect the duties on provisions and merchandise, and a toll from persons who pass the bridge. In this way, it is said, his majesty receives daily the sum of a hundred besants of gold. These rivers, uniting their streams below the city, contribute to form the mighty river called the Kian, whose course, before it discharges itself into the ocean, is equal to a hundred days journey; but of its properties occasion will be taken to speak in a subsequent part of this book. On these rivers and in the parts adjacent are many towns and fortified places, and the vessels are numerous in which large quantities of merchandise are transported to and from the city. The people of the province are idolators."... "In the city there are manufactures particularly of very fine cloths and of crapes or gauzes."

My own notes were written before referring to this old authority, but it will be seen there is a general agreement between the two. Indeed making due allowance for the time that has elapsed, Polo's account is not a very incorrect description for the present day. I suppose "Sin-din-fu" is an error of transcript for Sin-du-fu, a sufficient approximation to Ching-too foo. Relics still remain of the "rich and powerful kings." The "mile" in his narrative is an uncertain measure. He speaks of "many considerable streams,"—which surround and pass through the city. I have already spoken of those surrounding the city; but inside the walls, there is scarcely anything beyond the magnitude of a ditch; an insignificant stream entering the river on the east side of the city. This stream however, the 金水河 *Kin-shewy ho* represents a considerable-sized canal running through the city from west to east, that existed and was navigated by boats during the Yuen dynasty. It was first opened up during the Tang, but in the course of time was choked up and ceased to flow. Early in the 11th century, the channel was again cleared, and in less than a century it again became impassable, till about the year 1125, when the channel was once more renewed, widened out, and the embankments restored. Three subsequent restorations took place in the 12th century, and the next historical notice we have of it is in the latter part of the 14th century, when the viceroy's official residence was built on the south side, and it received its present designation; so that in Marco Polo's time it

Among the productions of Sze-chuen I have already mentioned Gold, Coal, Salt, Silk, Insect wax, Vegetable tallow, Opium, Tobacco, Coarse Porcelain and Embroidery. To these I may add a few other prominent articles without any pretension to an exhaustive list:—Silver, Copper, Iron, Lead, Quicksilver, Cinna-bar, Cedar, Pine, San-muh (wood), Bamboo, Varnish, Hemp, Grass-cloth, Tea, Sugar, Indigo, Paper, Fans, Horsewhips, Umbrellas, Lamp-wicks, Grass-shoes, Wine, Fruits, Spices, Scents and Medicines in great variety and abundance.

must have been in an efficient state, and in common use for the intra-mural transport of goods. The last restoration we read of was in the year 1731; but the present state of this old watercourse seems now again to call for renewed efforts, in order to restore it to the efficiency of ancient times. The bridges are sufficient to strike a stranger's notice, and although those that existed in Polo's time must have long since disappeared, yet we may believe that the present erections are very much after the old model; and indeed the existing descriptions give some notion of the stately figure they must have exhibited. A modern editor remarks:—"This peculiarity of the bridges in Sze-chuen is not noticed in the meagre accounts we have of that province, which all resolve themselves into the original information given by P. Martini, in his *Atlas Sinensis*, (1655)." This peculiarity however does exist to the present day, almost identically as Polo describes it; unless it be the toll on passengers, which I have not met with. "A hundred days" seems a long time for the downward journey. The French version says "eighty or a hundred," and we must remember the slow rate at which junks usually travel except under pressure. Fan Ching-ta in a journey down the river in 1177, occupied rather more than four months from Ching-too to Soo-chow in Keang-soo. "Fine cloth, crape and gauze" are still articles of manufacture in Ching-too.

ARTICLE IX.

REPORT OF AN EXPLORATION OF THE NEW COURSE
OF THE YELLOW RIVER.

 BY N. ELIAS, JR., F. R. G. S.

I.

THE new Yellow River having become a subject of interest to the North-China Branch of the Royal Asiatic Society, it was decided in the early part of last year to send an exploring party to examine and lay down its course; all information upon it received up to that time having been of a vague and unsatisfactory nature.

In accordance with this decision I had the honour of being requested to undertake the task, and my plan for carrying it out being approved by the Society's Council, a small party was formed for the purpose, consisting of Mr. H. G. Hollingworth, two Chinese and myself.

The plan of the journey was to go to Chinkiang by steamer; from there to proceed up the Grand Canal until we reached the Yellow River; to follow the river down to the neighbourhood of its mouth in the Gulf of Petcheli, and up again as far as the point where it diverges from its old course, (which was reported to be near Ifung in Honan) returning by the river and the Grand Canal to Chinkiang. This plan having afterwards been found practicable, it was carried out.

As most of the rivers in China are known to be in flood during the summer months and consequently in an unfavourable state for exploring operations, and as those in the northern districts are generally frozen over by about the middle of December, the autumn was considered the most advantageous season for the undertaking, and accordingly the party started from Shanghai on the 24th September.

The Grand Canal between Chinkiang and Tsin-kiang-pu, or in other words between the Yang-tsze and the old bed of the Yellow River, has been visited and described so frequently of late years by foreigners, that it is almost unnecessary to touch upon it here. Suffice it to say that it is everywhere in good repair, and the adjacent country well irrigated and apparently in a thriving

state both as regards cultivation, and to judge by the aspect of the towns on and near its banks, as regards trade also.

After crossing the old Yellow River however, a part of the canal somewhat less known, is reached; and the flourishing condition of the country is no longer noticeable: on the contrary, for a distance of about one hundred and fifty miles, though the canal itself is in tolerably good working order, the country in its vicinity has an arid, sterile appearance, and is but thinly populated. There are few towns or villages, and what there are seem neither populous nor busy, though they are not in ruins and bear but few traces of rebel devastation, general poverty being the prevailing feature. Although the country bordering on this portion of the canal is a part of the district lately infested by the Nienfei, yet these would appear to be less the cause of this general poverty than one of the effects of it; the source of both evils being more probably the want of irrigation which has existed since the Yellow River has flowed to the north of the Shantung ranges. The canal which at one time was so deep that in many places the level of the water was above that of the adjacent country, is now everywhere considerably below it, rendering irrigation even at a short distance from its banks without mechanical appliances almost an impossibility. Even the dry bed of the Soma lake is scarcely cultivated on account of its elevation above the level of the canal, though it is only separated from it in some parts by a bank of a few yards in width. It is true that this lake appears never to have been more than a shallow flood lagoon; nevertheless it was some feet below the general level of the country and was connected with the canal by means of watercourses and sluice gates, and if this is difficult to irrigate how much more so must be the country above and beyond it?

This one hundred and fifty miles being passed over, the Weishan (sometimes called Yü-shan) lake is reached at a small village called Han-chuang-cha. This is the most southern of a chain of lakes or rather lagoons which stretch from far to the south of Han-chuang-cha (I believe from near Su-chau-foo on the old Yellow River) to within a few miles of Tsi-ning-chow which constitute the only important feeder of the Grand Canal to the southward. In the summer they merge one into the other and form a continuous sheet of water, though very shallow in parts. In winter, when the water is low, these shallow parts are mere morasses which divide the sheet into three or four separate lagoons.

In former days the canal ran in some places by the side of these lagoons, and in others through portions of them, but being everywhere embanked on both sides it was only dependent upon them for its supply of water, the canal itself forming an unobstructed means of communication throughout the year. Of late years however, this section of the canal has been allowed to go to ruin, and those portions only are used which run through the morasses existing in the dry season, the lagoons themselves forming elsewhere the only channel for navigation.

Near the northern limit of these lagoons stands the city of Tsi-ning-chow, the first place of any importance on the canal north of Tsin-kiang-pu; it is said to be a place of considerable trade in ordinary times, but for the greater part of last year it was made one of the principal camps of Li Futai's soldiery, and is consequently not in a very flourishing condition at present. It has an inner and an outer wall, the former apparently new, and on the plain outside the city are numbers of stockades of different dimensions dotted about in every direction.

Still proceeding northward at a distance from Tsi-ning-chow of about twenty-five miles, the summit level of the canal is reached near a small town called Nan-wang. It is here that the river Wen falls into the canal, a portion of its waters flowing to the south, and the rest to the north, precisely as described by Staunton and other writers. The Wen is a small stream, scarcely twenty yards broad at the confluence, the canal at the same point being even less than that. Its course is from the N. E., and it is said to take its rise amongst some hills which are plainly visible in that direction. The currents of both are very inconsiderable; certainly under one mile an hour.

About thirty miles beyond Nan-wang we come to the new Yellow River, the canal for that distance being extremely narrow and shallow; a mere ditch in fact running between embankments large enough to confine a stream of infinitely greater volume.

The banks along nearly the whole of the Grand Canal between the old and new beds of the Yellow River, excepting those portions bordering on, or traversing the lagoons, are surmounted by earthen walls crenellated after the fashion of city walls, behind which are stockades at intervals of every few miles. All this work has the appearance of being recently constructed, though in many places it is already being broken up by the country people to make room for cultivation, for they can ill afford to lose

the strip of land immediately adjacent to and irrigated by the canal. The villages also show an attempt at fortification, most of them being surrounded by earthen or mud walls and moats, and indeed many solitary farms have some species of defensive work round them, and in most cases a small square brick tower within. These towers are rarely met with to the south of the province of Shantung. They are probably the "Water Castles" mentioned by the historian of the Dutch Embassy.

A journey of nearly four hundred miles on the Grand Canal, such as I have here attempted in a few words to describe, brought our party on the 17th of October to the southern bank or rather "limit" of the new Yellow River, near a small but busy town called Nan-shan.

The river at this point has no defined bed, but flows over a belt of country some ten to twelve miles in width, having merely the appearance of a flat, level district in a state of inundation; patches of ground, trees and even villages cropping up here and there; the Grand Canal traversing it in a general N. W. direction until it reaches the northernmost channel of the river at Pa-li-miau, some fifteen miles from Nan-shan. Along this fifteen miles the canal banks have been carried away in a number of places by the Yellow River breaking across them. The gaps are sometimes half a mile or more wide, and the current rushing through these almost obliterates the course of the canal and renders the navigation upon it difficult. For dreariness and desolation no scene can exceed that which the Yellow River here presents. Everything natural and artificial is at the mercy of the muddy dun-coloured waters, as they sweep on their course towards the sea; a flood not likely to subside, and a doubly mischievous one from the fact of its ever moving onwards with a swift current.

The Grand Canal is now dry from the Yellow River northwards as far as Lin-tsin-chow, or in other words it ends here, that portion N. of the summit level being merely a tributary of the Yellow River. During the two months of the year however, when the river is in flood and at its highest level, enough water it is said flows into the dry bed of the canal, to form a navigable stream as far as Lin-tsin, where it connects with the Wai-ho. Thus for some ten months in the year there is no water communication towards the north beyond the Yellow River.

Near the southern limit of the river is a channel running in a general N. N. E. direction, down which junks of a considerable

size were seen to be sailing. Being informed however that a more important one existed on the northern limit, it was decided to cross at once and commence the exploration by this latter channel, leaving the southern one until a better opportunity should offer. Having crossed accordingly to Pa-li-miau, (a small village eight li from Chang-tseu-chin), that place was made the first station, and the necessary observations for fixing its geographical position being obtained, the journey down the river was commenced from there on the 20th October, a date, by the way, so far advanced in the season as to render the greatest expedition necessary in order to complete the journey before the closing of the river by ice.

After sailing down the northern channel for about nineteen miles, a point is reached where it is joined by the southern one, and consequently also by all the water which higher up floods the country lying between the two. This point is called Yü-shan, and the deep, narrow, clean-cut river bed that receives the converging waters and leads them to the sea is that which fifteen years ago formed the course of the Ta-tsing. Although still narrow, some two hundred and fifty yards hereabouts, there are everywhere many indications of the river having been less than this before the advent of the Yellow Waters, and to judge by the velocity of the current and other circumstances, it has most probably become deeper also during the same period.

Proceeding down stream, we pass through an open well cultivated country with every here and there low dome shaped hills, sometimes detached, sometimes in groups, and backed up by a range some four hundred to six hundred feet high running about E. and W. which abuts on the river at Yü-shan but diverges from it gradually, the course of the stream being in general a N. E. one. The small hills near the river are of a limestone formation; the strata perfectly horizontal. The main range was not visited, but the hills composing it being similar in shape are probably also of the same formation. The stone is quarried but to a very limited extent, and villages within a few hundred yards of a quarry are built almost entirely of mud and chopped up reeds. Fifty-eight miles from Yü-shan by the windings of the river bring us now to the town of Tsi-ho-hien, a small newly walled unbusinesslike looking place, which except from the circumstance of its being the site of a serious obstruction in the river, would hardly call for a word of notice. This obstruction consists of the ruins of a stone bridge of some seven arches which at one time

spanned the Ta-tsing, but which now would reach only about three quarters of the distance across the river. There is a space between one extremity of it and the left bank of about a hundred yards which is used by boats as the only navigable channel. The deepest portion of this hundred yards is close under the left bank where at the time our party passed down (October 21st) there was a depth of five feet, and no stones to be felt with the lead, the outer portion of the hundred yards channel however, would probably not be practicable even at three feet. The bridge evidently stands in deep water, six fathoms having been found immediately above it and five a few hundred feet below it. The right bank is the steep one, and the left, near which is the channel, the shelving one, and naturally the shallow side of the reach. Its being now nothing but a wreck is of course due to the additional force and volume of water in the river for the last fifteen years, which it has been unable to withstand.

It is evident that the ruins of this bridge might be removed, and if no other obstruction existed, the river rendered navigable as far as Yü-shan or within nineteen miles of the Grand Canal. Unfortunately however, about three miles below this one, there occurs another, though a less formidable obstruction, in the shape of a shoal extending right across the river. In this case too the deepest side of the reach is the right, and here on the 21st of October only eleven feet was found, the bottom rising gradually towards the left bank. On the 6th November, when this spot was passed a second time, there was but five feet of water in mid-stream, and allowing for the fall since the 21st October we should have only about six or seven feet in the deep passage near the right bank. The length of the shoal would be about two to three hundred yards, and is the only place above the bar where less than two fathoms was found in the deep channel. The next point of interest we arrive at is Lo-kau, the port of Tsi-nan-foo, a long straggling unwallled town on the right bank. Tsi-nan-foo itself stands twelve li from the river and not far from the foot of the main range of hills which hereabouts average probably from eight hundred to one thousand and two hundred feet, and form a rather picturesque background to the low thickly wooded plain upon which the city is built, and which extends for many miles on both sides of the river, giving to the country its characteristic feature of flat lowland. Although this plain is essentially alluvial, yet there rise from it in this neighbourhood several small wedge-

shaped jagged hills or rather masses of rocks, in some cases heaped up into fantastic shapes, and the fragments near the bases worn into rounded boulders by the action of water. Their height is inconsiderable, but being perfectly isolated, sometimes several miles of plain intervening between two of them or between one and the main range, stamps them at a glance as the direct result of igneous action.

The trade of Tsi-nan-foo is said to be of great importance, but as a large proportion of it is carried on by means of cart roads, a traveller on the river has but little opportunity of forming an opinion of its magnitude. The number of boats seen at Lo-kau was not large, and many of them appeared to be merely passing through towards the Grand Canal. The only article of commerce noticed in any quantity was salt which had come up the river from Tië-mên-quan. Coal is met with as an article of trade both here and at other places on the Yellow River, and is used for cooking and other purposes to, I believe, a considerable extent; it is of a rather bituminous nature, and is sold at the rate of 1,200 cash per picul in Tsi-nan-foo. The principal mines are said to be at Tsau-fan, a place in the hills ninety li to the eastward, where the coal is sold at a very much lower price than at the city.

We pass on now through a thickly wooded well cultivated country for about one hundred and fifty miles; flat but dry, and the soil very light and friable. The river's banks are steep and indicate a rise in summer above the present (October) level of from eight to fourteen feet according to the distance from the sea. The re-entering angles are everywhere much eaten into by the current, and large masses of soil are continually falling away. In many places the grain of this year having been sown up to within a short distance of the water, the portions of the fields supporting the crop already sprouting have been undermined and fallen into the stream below, thus showing that the undermining process is a very rapid one, probably more rapid this year than the experience of the inhabitants who sowed the grain led them to anticipate. The graves near the river, or rather the coffins from them, have generally been removed to some distance back, and often to the opposite shore; the exhuming and removal being sometimes attended with great ceremony.

Near the course of the river are extensive vegetable gardens growing carrots, onions, celery, turnips, Shantung cabbages, brinjalls, capsicums, &c., &c., also regular plantations of fruit

trees such as the pear, the date and others of less importance, and in some places many square miles of land are occupied by the plant, the root of which is the ground nut. The date and the ground nut are two of the staple products of the district. At the time our party passed down, the former had already been gathered and dried, but it was harvesting time for the latter, and the inhabitants of nearly all the villages were at work in the fields, digging them up and sifting them. A third staple product is cotton which though of an inferior description is rather largely cultivated; and lastly we have the Shantung silk. The mulberry near the Yellow River appears principally, if not entirely, to be cultivated on the left bank, and for a distance of scarcely a hundred miles; the trees are standards and have much the appearance of those grown in England, being larger and older looking than those in Kiangsu. They are planted in lines at regular intervals, some of the plantations covering a large area of ground. Some specimens of the silk were obtained at a village in the heart of the district, also some eggs and cocoons. The best silk is yellow and very long reeled, much resembles the Szechuan, and I believe is often sold at the treaty ports as the product of that province. It is produced by worms fed indoors on the mulberry as in Kiangsu, the wild or outdoor fed worm not being educated in this district, but amongst the hills to the southward in the neighbourhoods of Mêng-yin and I-shui, as I am informed, where the food is not the mulberry leaf but that of a species of oak.

The principal towns situated on the river and within this one hundred and fifty miles of gardenlike country are Tsi-yang, Tsi-tung, Pau-tai and Li-tsin, all "hiens." The first is of no importance whatever; the second is a large busy and apparently thriving place, and would probably rank next to the capital in the matter of trade, though it certainly surpasses Lo-kau in every attribute of a "port;" the third is small and apparently but a poor place of trade and were it not the site of the principal custom house on the river, it would be scarcely more noticeable than Tsi-yang. The fourth town Li-tsin appears also to be of no great importance as regards trade though there is a circumstance connected with it which renders it remarkable, viz: the inroad made by the river into the city, which is situated on the concave bank of a sharp bend in the river. The swift current after eating its way through the foreshore has at length reached the S. W. angle of the city which it has carried away, together with some three hun-

dred feet on each side of the angle, and up to the present time is still at work cutting deeper into the breach, no efforts being made by the natives to arrest its progress. Some of the ruins of the wall and outlying buildings are now visible above water near the middle of the river, but they would form no obstruction to navigation, seven and eight fathoms having been found within a few yards of them and towards the right bank.

A few miles below Li-tsin the country begins to change its character; the well wooded and well cultivated district above described giving place to boundless tracts of mud and marsh but poorly cultivated and thinly inhabited, and the whole aspect one of a bleak, swampy, treeless waste, scarcely fit for man to dwell in. Nevertheless, on the river's banks are villages at short intervals of one another down to within about twenty miles of the sea, which causes the traveller on the water to form an exaggerated opinion of the population of the district, though he is easily undeceived by walking a short distance away from the river when it becomes apparent that on the whole the population is sparse.

In fact the only fairly habitable region is that belt of land immediately skirting the river, and from which the water of the annual flood drains itself off naturally, whilst on the tracts lying farther back it is either absorbed by the soil or remains on the surface in the shape of marshes and ponds, rendering habitation without artificial drainage almost an impossibility, except on a most limited scale.

At the limit of the habitable region, viz: about twenty miles above the sea by the windings of the river, stands the village of Tiě-mên-quan, the port of the Yellow River, and though only a village composed, like others in the neighbourhood, of mud built houses, it has every appearance of being a most important place. It is not a centre of trade but consists chiefly of hong's to which traders from the different towns in the neighbourhood come to transact their business, and during the winter months, when the river is closed by ice, it is said to be nearly deserted. Now although it is called a port, Tiě-mên-quan is only used as such by small Pei-ho and Yellow River junks. Larger vessels such as those from Ningpo, Shanghai, Swatow, &c., never come within twenty or twenty-five miles of it, but remain at an anchorage outside the bar called Tai-ping-wan, where they discharge their cargoes into Yellow River boats, receiving their

homeward freight by the same means. Thus for these junks Tië-mên-quan can scarcely be considered a port. The direct trade which exists between places high up the river and Tien-tsin, Chefoo and other ports on the gulf is carried on by boats of a lighter draft and of a different construction to the seagoing junks of the southern provinces, but well suited of course to the rivers and shallow seas on which they are employed. The voyage to Ta-ku it is said occupies these boats about two days with a fair wind; that to Chefoo about four days. In both cases the journey is performed by coasting round the gulf, and as the water for some distance from the shore is very shallow the sea never rolls heavily, and it is always possible to anchor in the event of a foul wind. The principal trade of Tië-mên-quan appears to be with Tien-tsin, which is the nearest open port, though junks bound to and from all parts of the gulf are to be found there. The exports are generally salt, cotton, dates, &c.; the imports are paper, timber, seaweed, beans, sugar, and a few English cotton goods and lead. More than three parts of the whole trade however would seem to be in salt, which is produced in the neighbourhood, and is not only exported but sent up the river in large quantities.

The salt manufactories, if such they can be called, for they consist generally of nothing but a few ponds and a mud hovel or two, are dotted about here and there over the waste marshy lands before alluded to, and though constituting on the whole a considerable industry yet it appears to be one that supports but a small proportion of the population, and brings but a limited area of land under subjection.

The country having only recently been left dry by the sea the soil still contains a certain quantity of salt, and by digging to a depth of two or three feet the salt water is obtained from which the brine is procured by evaporation. A manufactory or saltern consists of a series of shallow ponds connected one with the other by means of narrow ditches. The water is first collected in the outside pond, and after being allowed to evaporate for a few days is conducted through a ditch into a second, where it remains for a few days more and evaporates still further; this process being continued till in the fourth or fifth pond the salt is seen lying at the bottom, in crystallised layers as white as, and very much of the appearance of snow, when it is scooped out and stacked, and covered with a thatchwork of reeds and mud. The water in the first or outside pond is but slightly salt, but the saltness increases

with the amount of evaporation, until arriving at the last or inner pond, when it becomes so intense as hardly to admit of putting the tongue to it. It also acquires a peculiar bitter taste as the evaporation proceeds and becomes beautifully clear towards the end of the process. In such a concentrated solution of salt as is the fluid in the inner ponds of these salterns, it would be thought hardly possible that any animal could exist, yet in the clear water above the crystallised layers thousands of small transparent shrimps may be seen darting and gliding rapidly about in every direction and resting sometimes on the salt itself. I believe this little animal to be the "Brine Shrimp" or "Cancer Salinus" (Linn:) well known as the inhabitant of salt pans in England, where the workmen believe that it is of use in clearing the brine of impurities and cultivate it accordingly. Whether this belief obtains on the coast of Shantung I was unable to ascertain, but possibly it does, for certainly no attempt is made to expel the little creatures from the ponds.

Tië-mên-quan, as before remarked, is on the lower limit of the habitable and salt producing region; the country between it and the sea is an immense uninhabitable mud flat, stretching away on both sides of the river as far as the eye can reach. In the summer and autumn the greater part is covered with reeds, the more accessible of which are collected for fuel by a race of miserable reed cutters, whilst the rest afford cover for vast numbers of wild fowl, geese of two kinds, swans, pelicans, gulls, &c. In winter when the reeds are gone it must be a desert of mud, and when the river is in flood it is of course totally submerged. About twelve miles below Tië-mên-quan and half a mile from the river's left bank is a little knoll about ten feet above the general level formed of sea shells and debris, evidently at one time an island, and upon which stands a small brick Joss-house, apparently new, and a few mud houses, the dwellings of reed cutters. This place is called Lau-ye-miau, the only habitable spot for many miles in every direction, and is probably the point reached by the naval surveyors in 1860, and called by them Miao-shing-pu. About four miles below this again we come to the bar, an object that has excited a great deal of interest amongst residents in China, it having been thought that the navigability of many hundreds of miles of the Yellow River hinged upon the depth of water to be found there. This view however as will be seen immediately is not a correct one, worse obstructions existing

higher up. At the date I visited it, October 27th, the least depth found was about five feet near the middle of the river, the water at the time, being according to the pilot who accompanied me, about a foot or eighteen inches above low water mark. The deepest channel is near the right bank though there is one almost as deep near the left, the shallowest part being in the middle. In the former I found about nine feet, and in the latter seven feet which at low water (springs) would give little over seven and five feet. Several junks drawing it was said about two and a half feet of water, were seen sailing through the left channel. The range of the tide, would appear on the average to be about two feet, rather more at springs and rather less at neaps. Ordinary neap floods, when the river is not overflowed, are said to be perceptible for about twenty or thirty li above the bar, and springs when favoured by the wind and a low state of the river are sometimes noticeable as high up as Tiê-mên-quan, some sixty li above it. It is of course obvious that a sufficiently long stay to make personal observations on the tides was impossible, and my information on this subject is derived from a number of junk skippers, pilots and others, questioned at different times and under different circumstances, and who, strange as it may appear in this country, agreed remarkably in their statements. It is possible therefore that some approximation to the truth has been arrived at.*

From all I can gather, then, on the matter of the bar, I am inclined to believe that the draught of water of the southern junks is no obstacle to their ascending the river, but the almost total absence of tides and the narrowness of the channel constitute the principal difficulty; this more especially as the anchorage at Tai-ping-wan is stated to be safe and convenient and the transshipment there of cargo easily performed, whilst to work a large junk up a narrow and nearly tideless river for twenty miles would be a slow and risky process even though the depth of water would admit of it.

In the case of steam-vessels, of course, these objections do not apply; the depth of water being the only matter for consideration.

* [I may here remark that the Asiatic Society required the river to be examined as far down only as the highest point reached by the naval survey in 1860, viz: to about Lau-ye-miau and I wish it therefore to be distinctly understood that I did not go to the bar with any intention of surveying it, and do not pretend for a moment to have done so. My only object in visiting it was to carry my work down to a known fixed point, a few lines of soundings being taken across the bar itself merely by way of attempting to verify information previously received on the subject.]

II.

After returning to Tië-mên-quan from the bar on the 28th of October, our party had thus far examined only the section of the river included between the Grand Canal and the sea, and there still remained that portion above the Grand Canal to be explored. It was already late in the season and before us was a journey on the Yellow River of some five hundred and fifty miles, upwards of four hundred of which was to be performed against a strong current, and in a craft scarcely suitable to the navigation. Every effort therefore was made to push on as rapidly as possible, and no special halts were made for any purpose, except a short one for longitude observations, until arriving at Pa-li-miau on the Grand Canal (our first station) on the 10th November.

The river here as before noticed has no defined bed but presents the appearance of a belt of country ten to twelve miles broad in a state of flood, trees, ruined villages and patches of bare mud being all that is left of a once fertile and prosperous district. We have already seen that this is the aspect of the river for the nineteen miles immediately below the Grand Canal, viz: as far as Yü-shan and in proceeding up stream we find another seventy-six miles (more or less according to the season) of a precisely similar character, making in all a section of ninety-five miles scarcely worthy of the name of a river. Bed there is none, and at some periods of the year scarcely a channel for boats of a moderate size. It is true the natives speak of two channels, and indeed use them, a northern one and a southern one, but both were gone over during the month of November, and when I say that our boat drawing only fifteen inches of water had often difficulty in finding a passage, little more need be said concerning the practicability of this portion of the Yellow River. During the highwater season, junks drawing, it is said, as much as three or three and half feet can use the southern channel, but the journey is slow and laborious in the extreme, and whole days are frequently spent in kedging over shoals or through places where the deposit having found a group of trees or some other object to silt against has commenced the formation of a mudbank. That there can be no great depth in this lagoon-like section of the river is at once apparent when we consider that the same volume of water which lower down is contained between the banks of the narrow Ta-tsing is here spread out over a belt of country

ranging from ten to fifteen miles in width. Had this belt at any time been the site of a fairly deep river or even a deep dug canal, the water of the Yellow River, although at first of too great a volume to be contained in the bed of such river or canal, would in time have so enlarged it by means of its scouring power as to have rendered it of the necessary capacity. This indeed is what took place in the case of the Ta-tsing, for, as we have already seen, the bed of that stream has become both deeper and broader since the advent of the Yellow River and now contains the whole of the latter's waters in addition to its own, and only overflows its banks at the height of the flood season. Above the Grand Canal, however, there was no river bed of sufficient size to form the basis of a course for the Yellow River, and hence the wide spread shallow flood instead of a defined stream. There were, it is true, two small canals falling into the Grand Canal within seven miles of one another; the more southerly of these, the Sun-kiang, was a very small one, only ninety li long it is said. A portion of it was examined, and the banks in some places found to be hardly distinguishable, but everywhere the waters of the Yellow River stretched away like an overflow on both sides. To judge by the ruins of bridges, houses and pailows the region through which it runs must formerly have been a prosperous one. At present a few mud and reed hovels are the only habitations, and a few patches of wheat sown on the mudbanks left temporarily dry by the yearly secession of the waters the only signs of cultivation. The second or northerly canal was of much more importance than the Sun-kiang, and though shallow and narrow was about four hundred li in length. It was, and still is, called the Chau-wang-ho, and led, I am informed, from the old Yellow River to the Grand Canal near Pa-li-miau, the point of junction with the old Yellow River. I have never been able to ascertain with any certainty but I believe it to have been a short distance to the east of the place now called Lung-mêng-kou, or the breach in the old river's bank through which the yellow waters leave their former bed. It presents on the whole much the same appearance as the Sun-kiang; viz: an embanked watercourse running through an inundated country. Its artificial banks were at one time at some little height above the general level of the country, but they have now in most places been either carried away by the floods or worn through by the current of the Yellow River. The villages and bridges are mostly in a state of ruin and

the latter as they reach now little more than half way from bank to bank are additional evidences of the power of the river to form for itself a bed provided only that it finds a sufficiently durable basis to work upon. Durability in this case however is wanting, and even had the Chau-wang been many times its original breadth it would still have been useless as a channel for the Yellow River, the artificial embankments being naturally unfitted to withstand the scouring process. As it is the canal is only traceable here and there for a few miles at a stretch, and as its course through the belt of country at present occupied by the river was a winding one, the portions now left are, as it is only natural to suppose, those whose direction was identical or nearly so with that taken by the Yellow River.

A distance of seventy six miles then, by the southern channel from the Grand Canal, brings us to the point where we find the yellow waters again flowing in a defined channel which is traceable as far as the old bed, a distance of about fifty-two (stat.) miles. At the low water season this channel contains the whole Yellow River, but as the banks in the highest places are no more than about ten feet above the November level it can contain, during the flood season, only a portion of it, for though broad, (in some places over a mile), it is everywhere exceedingly shallow and its capacity much contracted by shoals and mudbanks. Now although when the banks are at ten feet above the level of the water this channel has the appearance of being the permanent bed of the river, yet so far from thinking it permanent, I should hesitate even to call it a "bed" at all, for the banks and indeed the country for miles on each side, are composed of the river's own deposit which seems rather to have silted to a certain elevation above the river level than that the water had cut a bed for itself in the soil to a corresponding extent—or in other words it appears that the river here flows but little if at all below the general level of the country, a fact which is at once demonstrated by considering, for example, that at a point in the lagoon-like section just below the lower end of the defined channel and where there were no banks apparent, *old* trees were growing on about the level of the water, and ruins of houses were standing on patches of mud only just awash; whilst at a point twenty miles higher up and within the defined channel *old* trees were also growing on mud banks about flush with the waterline, though here the river banks, were ten feet high and little more than the roofs of

houses were to be seen above ground. It is almost superfluous to say that the country thus formed of the river's deposit is a perfect level, and that the soil is very light and mobile, and though the flood of each successive year by adding more deposit increases the stability, yet a powerful stream like the Yellow River can I imagine hardly be thought to have adopted a permanent course, when the nature and height of its banks, the character of the adjoining country, the extent of its annual overflows, &c., are taken into consideration.

Perhaps the most striking proof that the banks and neighbouring country are the creation of the river's deposit rather than that the channel is a natural excavation, is that of the buried or silted up houses, which besides is a circumstance of interest in other respect; as, for instance, that it goes to show not only the power of the Yellow River in changing the configuration of the country with which its waters come in contact, but also the effects produced by it in the economical condition of those portions of the population whose misfortune it is to inhabit regions coming within its influence. Such a region is that through which this section of the river flows, and where we find many entire villages half buried in deposit, and deserted by the greater portion of the inhabitants, those who remain being in a poor and miserable condition. The houses are frequently silted up nearly to the eaves, and have generally been abandoned, though a few have been dug out. As an example of this I may mention a joss house within a few yards of a point in the river where the level of the deposit was some ten feet above that of the water. To enter this joss house it was necessary to crawl under the eaves, and when inside it was evident from alterations that had been made in the doorway &c., that for some time the inhabitants had attempted to accommodate themselves to the constantly diminishing height of the building, though since the last year or two apparently they had been compelled to abandon it. The deposit on the inside was at precisely the same level as that on the outside, and was said by the villagers in the neighbourhood to be twelve Chinese feet in depth (say thirteen feet English) and to have been the work of fifteen years, or fifteen successive floods of the Yellow River. The heads of some of the larger josses still remained visible above the mud level, but judging by them the size of the rest of the figure to which they belonged, I should say that the statement of the villagers was rather exaggerated, and that nine

or ten feet (English) depth of deposit would be nearer the mark; and in this opinion I am borne out by the proportions of the building, the height of the river and other circumstances. The houses, it may be remarked, in western Shantung and southern Chihli, are built of brick and are more solid, and of altogether superior construction to those in Kiangnan and eastern Shantung. Many have two stories, and in every small village are to be found one or more of those square, castellated little towers sometimes called "watercastles."

So little used is the Yellow River above the Grand Canal, and the navigation on it so little understood, that the people living near its banks and even the boatmen themselves seldom know the distance from one place to another by the river, but always speak of distances by the road, and even then rarely agree, showing of what little importance the river is regarded as a means of communication, even though no roads worthy of the name exist in its neighbourhood—nothing in fact but mere tracks over the mud. In the same way information regarding the direction and distances of towns lying back from the river can never be obtained with any certainty, and though the boundary line between Shantung and Chihli was known approximately, that between Chihli and Honan was a subject of the most vague statements by the people living near the spot. The absence of towns along the course of the river may to some extent account for this kind of ignorance—the only one *on* the river is the old or former Fan (hien) of which there is nothing left now but a small village and a ruined pagoda, the present town of Fan being it is said some thirty li to the northwards. Tung-ming-hien is near the river but not visible from it—the nearest point is one from which the town is said to be distant 12 li in a S. E. direction. I believe it to be a place of no importance, and there is certainly no trade carried on there by means of the Yellow River. A somewhat tedious journey of a fortnight from the Grand Canal brought our party on the 24th of November to Lung-mên-kau, the diverging point of the old and new courses of the Yellow River and the upper limit of the exploration. The breach in the embankment of the old river is about a mile in width, and the present channel runs, as it were, diagonally through it. The two banks at this point are about three miles apart. Near the northern one there is a depression about a quarter of a mile broad full of small sandhills, the only part of the old bed having any appearance of a dried up

watercourse. This was the main or low water channel of the old river, the artificial, outer embankments marking only the limit attained during the annual floods. The course of this low-water channel, as indicated by the present river to the west, and the line of sand hills to the east of the breach, was not always parallel to the flood banks, but made a winding, tortuous line between them, apparently like a natural river, and the point where the breach now is was one where the current impinged on the north bank. Those parts of the bed of the old river lying between the low-water channel and either bank are at a considerable elevation above the general level of the neighbouring country, and this is particularly apparent at the breach where the bank is seen in section, the outer slope being some forty feet in vertical height whilst the inner would be about twenty or twenty-five feet—showing an elevation of the bed of fifteen or twenty feet *near* the bank; though as it slopes somewhat towards the low water channel the average for the whole breadth (exclusive of that channel) would probably not be more than about fifteen feet. Thus by a mere cursory inspection of the neighbourhood of the breach, the cause of the Yellow River's change of course is at once apparent. The river had so diminished the capacity of its bed, (which by the way was always an artificial one), by depositing the alluvium with which its waters were charged, that the main pressure during the flood season had come to bear on the upper or weaker part of the embankments, and no measures having been taken to strengthen these or deepen the channel, the great catastrophe happened which with its consequences had been predicted by the Abbé Huc* some years before, a catastrophe which has caused not only the devastation by flood of that line of country through which the river now flows but has also impoverished to such an extent the districts through which it formerly flowed, and which were dependent upon it for irrigation, as to render them almost uninhabitable and to throw a great portion of the population out of employment.

* Car le lit actuel du fleuve Jaune, dans les provinces du Honan et du Kiang-sou, sur plus de deux cents lieux de long, est plus élevé que la presque totalité de l'immense plaine qui forme sa vallée. Ce lit continuant toujours à s'exhausser par l'énorme quantité de vase que le fleuve charrie, on peut prévoir pour une époque peu reculée une catastrophe épouvantable, et qui portera la mort et le ravage dans les contrées qui avoisinent ce terrible fleuve.
— *Voyage dans la Tartarie*, 8^e. Tom. 1, p. 223.

Lung-mên-kau is a small village built along the north bank of the old river east of the breach. About ninety li W. S. W. of it stands Kai-fung-foo (or Pien-liang-ching as it is more generally called) the capital of Honan; and twenty-five or thirty li to the S. E. is Lan-i (or Lan-yang) hien, a place that has gone entirely to ruin during the last few years. It consists now of nothing but a few mud and reed houses and is said to have been abandoned by the mandarins. A road leads down the old bed and through Lan-i towards the south, and boats bringing cargoes down the river sometimes discharge them at Lung-mên-kau for conveyance by waggon to towns in that direction. Some of these boats bring small quantities of good anthracitic coal from the neighbourhood of Hoai-king-foo; others iron ware, such as cast pots and pans wire, &c., from places not far distant; all of which are sent south or east by road, Lung-mên-kau having no trade whatever of its own.

After leaving Lung-mên-kau, the river was followed down as far as the Grand Canal, which was reached on the 30th November. It had been intended as before remarked to have examined the channel, which leads from Nan-shan (on the Grand Canal) to Yü-shan, and runs near the southern "limit" of the river; but the fall of water had been so great since the first view of this channel was obtained on the 17th October that it had become impracticable for all but the smallest boats, and seeing that the ice had already begun to form on the shallow waters of the river, it was thought advisable rather to leave this channel unexamined than incur the risk of being frozen in, and having to transport the timekeepers overland. However as its length can be scarcely twenty miles, and as it is impracticable for large boats except during the summer, but little could have been gained by visiting it, more especially as the northern parallel channel had already been thoroughly examined. At Nan-shan therefore on the 1st December the exploration came to an end and the party returning by way of the Grand Canal arrived at Chinkiang on the 15th of December.

To sum up shortly the capabilities of the Yellow River for navigation, it would seem that a vessel of sufficiently light draft to cross the bar, would have no difficulty in ascending the river during all but the lowest point of the season as far as Tsi-ho a distance approximately of two hundred and ten statute miles from the bar; and were the ruins of the bridge at that place removed

a further distance of fifty-eight miles would be rendered navigable, making in all two hundred and sixty-six statute miles from the bar to Yü-shan. To such craft the shoal three miles below Tsi-ho would scarcely be an obstacle, though with the river at its lowest and the vessel loaded to cross the bar at high water it would probably prove impassable. In many places the bends in the river's course are very sharp with spits sometimes projecting from the salient angle, but this would certainly be no obstacle to vessels under two hundred feet in length, and considering the navigation on the Pei-ho, where the curves are still sharper and the river narrower, even a greater length might be found practicable.

All beyond Yü-shan, as far as Lung-mên-kau, must be regarded as totally unnavigable, except perhaps the nineteen miles between Yü-shan and the Grand Canal which could be used during the high water season. The difference in the river's level between the highest and lowest points in the year is something very considerable; but until the fluctuations shall have been observed throughout a whole year it will be impossible to obtain accurate information on this subject. The yearly rise or fall is sometimes greater than at others, but taking the November level of last year as a base, and judging of the former by the indications of the banks and other signs, and of the latter from native informations, I should think that a yearly range of twenty to twenty-two feet would not be far from the mark. Both rise and fall take place very irregularly, and it is said that a fall of three feet in one day is a common occurrence especially towards the approach of winter.

The current during the flood season is of course far stronger than when the water is low, but on this subject also little can be said in the absence of a whole year's observations. On the 26th October at Tië-mên-quan it ran from two and a half to three knots an hour, and at Lo-kau on the 5th November rather under four, and near Yü-shan on the 9th about the same, whilst on the lagoon-like section above the canal it was generally under two. Such solitary instances as these however form but a poor guide for making a general estimate, and though I believe that at the lowest point of the season it is not much less than in November, yet during the height of the floods it must be nearly double.

As in the first paragraphs of this paper mention was made of a southern outlet of the Yellow River existing at the present day,

it must be explained here that this was caused directly by a rupture.

Though not a subject coming strictly within the province of this report, it may not be entirely out of place to notice here the rupture of the south bank of the old river near Yang-kiau in Honan, about one hundred and fifty li above Kai-fung-foo, which occurred in the 6th chinese month. Not having visited the spot my information on this subject is of course derived from the natives, who report that the bank is carried away for about three li and that the water of the Yellow River flowing through the breach floods a large tract of country outside the bank, and then finds its way into a small river called the Sha, a tributary of the Whai, which latter flows into the Hung-tsze lake. This breach is called Sin-lung-mên-kau, the one lower down being sometimes known as Lau-lung-mên-kau. It is said that the authorities are trying to repair it in time for next summer's flood, about a third of the work being already finished, (in November), and the common belief is that when the upper one has been closed the lower one will be taken in hand and the river made to flow along its old course to the sea. This however would appear to be impossible as long as the old bed remains at its present level and to deepen it or to raise the embankments would be equally impossible in the present disorganised and impoverished state of the country. On the 22nd November, while proceeding up the Yellow River, I had a corroboration of the statements of the natives regarding a communication with the southern waters by meeting five or six Hung-tsze boats whose people said they had come from Ying-chow (or Hing-chow) in Kiangnan by way of the Sha. These boats were said to draw about one foot and a half of water, but as they were dropping down with the current no information could be obtained concerning the Sha or the communication between the Yellow River and the Hung-tsze, a matter of great interest, as should a permanent communication be found to exist the Yellow River will have to be regarded as *in part* nothing more than a tributary of the Yang-tsze. The amount of water parted with through the new breach I believe to be very inconsiderable.

ARTICLE X.

RETROSPECT OF EVENTS IN CHINA AND JAPAN
DURING THE YEAR 1868.

THE year opened with the interesting intelligence that Great Britain had resolved on an Abyssinian expedition, and that on November 27th, 1867, two millions sterling had been voted for that purpose. The resolve was well received throughout the empire. The first mail of the year also brought news of the execution of the Fenian murderers at Manchester on November 24th. The precautionary measures taken prevented any outbreak among the large Irish population of Manchester.

A meeting of land renters in Shanghai on 10th January fixed the assessment for taxing purposes to the end of the municipal year. Indications of the increased difficulties of municipal government in the cosmopolitan settlement of Shanghai were not wanting in this meeting. On the 5th January a fire destroyed several foreign houses on the French Concession close to the parish church. On the 6th the Nienfei rebels threatened the banks of the Yangtsze, north of Chinkiang, and towards the end of the month actually swept through the important town of Hsien-wen-miao, taking from it much booty. A letter from the Tsung-le yamen pointed out the status of the Chinese members of the mission about to start to Europe.

On the 4th the *Costa Rica* brought intelligence of the successful opening of Hiogo and Osaka to foreign trade. Mr. Burlingame visited Tseng-kuo-fan late in the month to explain the mission to Europe. From Japan the startling and melancholy news reached us that the American Admiral Bell and Lieut. Reid had been drowned on the bar at Osaka on the 11th. Several important bankrupt cases came before the Supreme Court this month, and the agitation concerning the appropriation of the Recreation Fund will long live in the memory of Shanghai.

Mr. McLeavy Brown arrived in February to join the Chinese embassy, and on the 16th information reached us that Mr. T. T. Cooper had reached Shaze in Szechuen, and that Mr. Myburgh, H. B. M.'s Consul at Hiogo, was dead. General Napier landed in Abyssinia on the 4th. On the 14th the Hongkong and Shanghai

Bank declared a dividend of 12 per cent. and a large reserve, and the annual meeting of the Shanghai Steam Navigation Co. took place on the 21st. A most serious fire occurred in Foochow, destroying property to the value of 200,000 taels. At Osaka some hard fighting proved the hopelessness of the Taicoon's cause, his troops were defeated and his palaces burned or plundered. Foreigners had to retreat from Osaka in no very pleasant manner.

Early in March the rebels again threatened Tien-tsin and devastated the country close to the capital. The Taotai of Shanghai notified that government institutions had been established in Shanghai for the gratuitous vaccination of native children. In Japan a boat's crew from a French man-of-war were brutally murdered by some soldiers of the Prince of Fizen. Ample vengeance was however exacted. Land sales effected in Shanghai during the month show an astonishing decrease in the value of estates.

Telegraphic news in April announced the appointment of Ross Browne as Minister to China. On the 11th it was agreed at a meeting of the China Fire Insurance Co. to wind the affair up, a most unwise resolution as subsequent events have proved. The Mixed Court in the Maloo was opened on the 9th instant. News per *Cudiz* on the 15th announced a murderous attack on Sir Harry Parkes while on a visit to his Imperial Majesty the Mikado of Japan. Sir Harry's life was probably saved by a Japanese noble who was riding by his side. Several men of the escort were wounded, none however, fatally.

In May rebellion was still rampant near Tien-tsin, and Taku was abandoned. Great fears were entertained in Tien-tsin that the place would be taken. Mr. T. T. Cooper had reached the western boundary of Szechuen in safety. On the 4th instant a meeting of land renters was held at H. B. M.'s Consulate, when a resolution was passed declaring that non-rate paying German firms should be excluded from the benefit of municipal institutions. A meeting of the Shanghai Club to consult with regard to their indebtedness to the Recreation Fund ended in nothing. On the 24th May the *Ellora* brought the good news that the Abyssinian expedition had ended most successfully and gloriously, that Theodore had been slain, Magdala taken, and all the captives released. The would be assassin of the Duke of Edinburgh in Australia had been sentenced to death. On the 23rd the fine P. & O. steamer *Benares* stranded on Fisherman's group and soon

became a total wreck. During May the agitation concerning Chefoo gold mines commenced.

In June Shanghai was amused and edified by the celebrated trials for libel at the suit of Mr. Barnard. The two defendants were fined small sums. The celebrated Vice-roy Tseng-kuo-fan visited Shanghai this month. The usual complimentary Consular visits were made to, and returned by him. At Kiukiang a curious dispute arose between the Taotai and Commissioner of Customs. The Taotai seems to have got the best of it, as the Commissioner has been sent elsewhere. Lord Brougham's death was announced. The French exploring expedition which had started from Saigon, arrived at Hankow after two years absence, during which the chief died. The rebels were gradually retreating from near Peking. A new set of rules regarding the settlement of questions connected with Customs' confiscations arrived from Peking, as also a long letter from H.B.M.'s Minister regarding security chops. Great excitement was caused by the action of certain Americans who chartered the steamer *China* to go to the Corea for the apparent purpose of unearthing a dead King and taking possession of the treasure with which he was supposed to be buried.

On the 8th July a Court was held at the United States Consulate to try F. B. Jenkins for his share in the expedition to the Corea, alleged to have been for the purpose of exhuming the body of one of the Kings. The Court acquitted the accused. A Naval Court was held about the same time at the British Consulate on the Commanding and other officers of the Peninsular and Oriental steamer *Benares*. The Commanding officer was acquitted, but two of the others had their Certificates suspended for a period of six months. On the 8th a farewell dinner was given to Mr. Consul Winchester on his return to Europe after a service of twenty-five years in China and Japan. Messrs. Russell & Co.'s proposal to erect a jetty opposite to their premises in the British settlement led to a prolonged discussion as to the claims of private owners to the foreshore of the river opposite that settlement. Messrs. Russell & Co. finally withdrew the proposal. Mr. Fitzroy, for many years Commissioner of Customs at Shanghai, died at Nagasaki on the 8th. On the 17th a severe gale passed over the settlement causing extensive floods and resulting in the loss of many native junks. On the 23rd Mr. W. Medhurst assumed charge of the British Consulate during the absence of Mr. Winchester.

In Hongkong much dissatisfaction was expressed at the action of the Chinese Government in establishing within the limits of the Colony certain stations for levying taxes on their subjects, and also for placing Custom's barriers at the several entrances to the harbour for the purpose of obtaining contributions from passing vessels.

August opened with the news that the Taotai at Chefoo had formally forbidden the working of gold mines in Shantung province, declaring such to be in contravention of the laws of China.

On the 3rd a very able letter concerning Consular jurisdiction over persons on board ships in Chinese waters was issued by Mr. Seward, United States Consul General at Shanghai. A Company to be called the North-China Steam Navigation Co. for the purpose of continuing Messrs. Trautmann & Co.'s line of steamers between Shanghai and the northern ports was instituted. News from the north declared that the rebels had again entered Shantung.

About the middle of the month news was received at Shanghai that a gross outrage had been committed by a Chinese mob on the persons and property of certain Missionaries who had taken up their residence at Yangchowfoo in this province, with the intention of establishing a permanent Mission. Mr. Medhurst proceeded at once to the spot to investigate the facts of the case.

The Municipal Council having revised objections to the expense of keeping prisoners sentenced to hard labour by the Mixed Court, the Taotai took the opportunity of declaring this punishment to be unsupported by Chinese precedent and in consequence abolished it.

An intercepted despatch from Tseng-kuo-fan Viceroy of the Liang Kiang to the central government respecting treaty revision was published about this time. While in some respects more favourably disposed towards foreign improvements than might have been expected from its author, there was throughout a marked indisposition to accept the altered position of affairs now becoming evident even to Chinese statesmen.

Mr. Medhurst having proceeded to Chinkiang and Yangchow found that a spirit of hostility to foreigners had been aroused in with cities, which was fostered if not originally instigated by the ruling classes. Under these circumstances he proceeded to Nanking to obtain a personal interview with the Viceroy and urge on him a settlement of the points at issue, which mainly consisted of the right of residence undisturbed in the interior, and

also compensation for injuries received. While negotiations were proceeding the ill-timed withdrawal of H. M. S. *Rinaldo*, Commander Bush, which had accompanied him so far, broke off these negotiations before their conclusion, and led to the whole matter being referred to Peking for adjustment.

News was received of the arrival of Mr. T. T. Cooper at Bathang in Thibet on his way to the Indian frontier. The opposition of the Thibetan authorities combined with want of funds unfortunately compelled his return after he had assayed to gain the Birman frontier through the territories ruled over by the Panthay, King of Yunnan. While trying to make arrangements with an officer of the latter he was betrayed to the Chinese, by whom he was kept in prison for some time and only let go on his promise to return at once to Hankow.

The erection of telegraph posts in the British settlement by a private firm was made an subject of discussion with reference to the recurring question of public and private rights in the settlements.

It was announced that the British government had given a plot of land near the present Consular Jail to this Society on condition that a building should be erected thereon for the purposes of a library and museum.

Early in November a British squadron consisting of the *Rodney* Capt. Heneage, the *Rinaldo* acting Commander Furguharson, and H. M. gunboat *Slaney*, accompanied by Mr. Medhurst went up to Nanking for the purpose of effecting a settlement of the Yangchow difficulties hitherto refused by the provincial government. A threat to seize a new Chinese government gunboat, unless some satisfactory arrangement could be arrived at, led to Tseng-kuo-fan the Viceroy acceding to all Mr. Medhurst's demands. A detachment of Seamen and Mariners afterwards proceeded to Yangchow where they remained for some four weeks having taken up quarters in the Hsing-chiao temple. The expedition was afterwards joined by the *Icarus*, Commander Lord C. Scott. During the stay of the forces at Yangchow the utmost order was preserved in the city.

News arrived on the 24th of the death of Mr. Thomas Taylor Meadows H. B. M. Consul at Newchwang. Mr. Meadows was a corresponding member of this Society, and was well known not only in China but in Europe for his knowledge of the Chinese people, government and language.

During the year few events of importance occurred. The partial success of the Burlinghame Mission in the United States seemed to raise the hopes of the old obstructive party, and led to a fixed resolution on their part to oppose all changes however needed. Petitions to open mines of coal or metal were persistently refused, and such simple matters as the improvement of the roads leading to the coal mines of Pechili were forbidden on the most trivial grounds. The negotiations for the revision of the Treaties of Tientsin were carried on but slowly, Sir Rutherford Alcock finding it a difficult matter to overcome the prejudices of the authorities so far as to obtain any real concession.

11.5

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